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Road Warrior's Checklist

MAR/APR 2000 VOL.3 NO. 2

HANDHELD PC

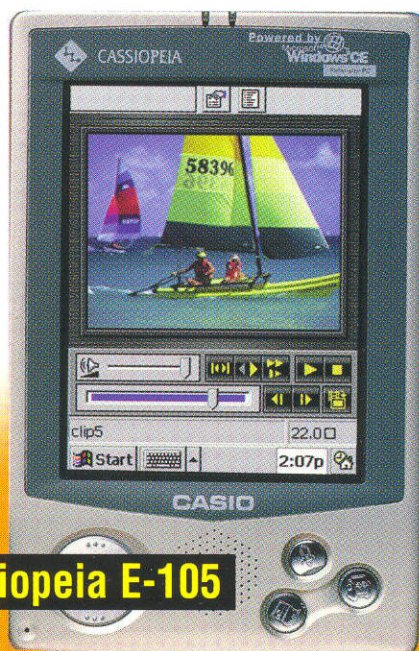
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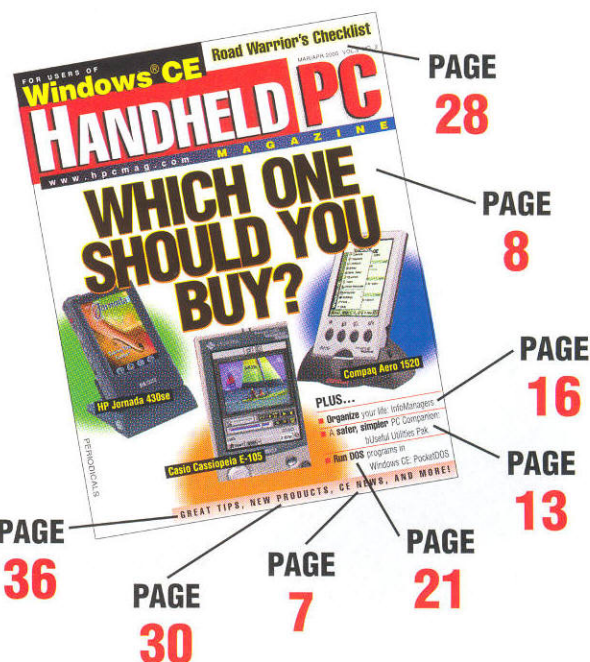
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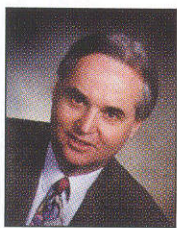
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From The Editor

Rich Hall

What is a "Pocket PC?"

The first item in our newsBYTES section (page 7) announces "The Next Generation — Windows Powered Pocket PCs." Microsoft has finally, formally announced the next version of its Windows CE operating system and the next generation of devices based on it — the Pocket PC!

The Pocket PC is the successor to the Palm-size PC. It will be powered by the latest version of the Windows CE operating system and have additional built-in applications including Microsoft Reader, an e-book viewer. It will include Microsoft's Windows Media Player, to give Pocket PC users access to music in Windows Media and MP3 formats. It will also include additional built-in applications and a number of other important improvements — more on this next issue!

In this issue, Jim Christian provides a frank, head-to-head comparison of three of the most popular and successful Palm-size PCs: The Casio E-105, the Compaq Aero 1520, and the HP Jornada 430se. I'm betting that each of these companies will release a Pocket PC, but I don't yet know which ones we'll be reviewing in the May/June issue.

The general focus of this (March/April) issue is utility and productivity. Ed Zabrek takes a fresh look at bSQUARE's updated utilities suite, the bUseful Utilities Pak, and his conclusion is... Well, you'll have to read the article to find out. Thanks to David Shier for his review of general purpose information managers. These applications make it easier to organize important data on your PC Companion.

I take a look at two nifty little programs that add a lot of utility to the PC Companion. The first, PocketDOS, lets H/PC users run DOS applications on their PC Companion. There are literally thousands of free DOS utilities and applications available. The second program, PocketTV, takes multimedia a step further by adding an MPEG player to PC Companions.

Thanks go to Michael J Posner and Randolph Sly for their advice on fine-tuning PC Companions and preparing for the worst. Thanks also go to Jim Christian for his Quick Tips and PC Companion Tricks, and to Steve Seroshek of Microsoft Technical Support for his advice on synchronizing data via Remote Access Server (RAS). Finally, thanks to Andy Seybold for his discussion of Bluetooth and the future of the wireless Internet.

YES! We support Handheld PCs!

I've received a couple of letters asking whether, with the increased focus on the Palm-size and now the Pocket PC, we will continue to support the Handheld PC and H/PC Pro devices. The answer is YES! In this issue the majority of the Tips, most of my answers to the letters, the software reviews, the user profiles, the Microsoft column, and the majority of new software products relate directly to the H/PCs, or co-relate to H/PCs and Palm-size PCs.

We write about the latest news and introductions, whether they be Pocket PCs or Handheld PCs. For the next few issues, much of this will relate to the Pocket PC. We will cover that news and review those products. As new H/PC Pros are introduced, we will continue to report on them. Our other sections will continue to cover all PC Companion platforms.

However, there will be a very noticeable change on the cover — we are renaming the magazine. Beginning with the May/June issue, *Handheld PC Magazine* will become *Pocket PC* magazine. Over the next year Microsoft will strongly promote the new "Windows Powered Pocket PCs." We believe that "Pocket PC" will become the name users associate most with these devices. We want them to easily recognize our magazine as the best source of information and support for their new device.

Our name will change, but we will continue to be the same magazine, helping all Windows CE users get the most out of their PC Companions.

Rich Hall



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The Handheld PC Magazine (ISSN 1093-2585) is published by Thaddeus Computing Inc., at 110 North Court Street, Fairfield, IA 52556, USA. Periodicals postage paid at Fairfield, Iowa, Midland, MI and at additional mailing offices. Subscription rates payable in U.S. dollars, checks drawn on a U.S. bank, or by credit card — one year: \$19.95; two years: \$34.95. Postage: U.S. and U.S. possessions free; Canada, Mexico add \$6 per year; other countries add \$18 per year. Published bi-monthly, plus one bonus issue, in late fall/early winter. Please allow four to six weeks for receipt of first issue. Executive, Editorial, Circulation, Marketing Offices: 110 North Court Street, Fairfield, IA 52556. Telephone: 515-472-6330, Fax: 515-472-1879. Advertising Offices: Atwood Publishing, 11600 College Boulevard, Overland Park, KS 66210; Telephone: 913-469-1110; Fax: 913-469-0806.

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Because of staff limitations we cannot respond to all letters or e-mail. Please send us questions, suggestions for improvements in the Magazine or in Windows CE, ideas for new software, or general comments. All responses, unless otherwise indicated, are from Rich Hall, Editor of Handheld PC Magazine. You can reach Rich at rich@thaddeus.com.

Inbox

Need to read documents and take notes – which PC Companion?

I just purchased your magazine and read it cover-to-cover — a good job. However, I feel unclear about a good choice to make for a new PC Companion and I'd like your advice. My job requires me to read a tremendous number of Word documents (specs and the like), coordinate many tasks and contacts (PIM type stuff), and of course take brief notes at meetings. I have powerful laptop and desktop machines, but I don't want to cart them around all the time. Could you recommend a PC Companion (or two)? You raved about the Jornada 680. Is there a smaller machine that I could still comfortably read documents on?

Lee Eggebroten

Lee, I think the HP Jornada 680 Handheld PC Pro (a 690 is now available) is about as small as you want to go. You'll even be able to do light editing and writing on it. If you want to go smaller, you'll have to loose the keyboard and get a Palm-size PC, which uses a pen-entry system similar to the Palm PDAs. You'd have to convert the Word documents to simple text format to read them with the Palm-size PC's built-in Note Taker application. The Jornada 680 will read Word and Excel documents without the need of converting them to another format. And once you get used to the smaller keyboard, it's pretty easy to compose documents on it. Press rumors are circulating that the next version of the Palm-size PC, renamed the "Pocket PC," will have versions of Word and Excel on it. Hope this helps some. — Rich

Developing for H/PCs and P/PCs

Thanks for the links to developer sites (see below) — they were helpful and I found much cool stuff out there. To write programs for the Windows CE operating system one can use the latest version of Visual Basic or Visual C++. In addition to one of these programs, one must also have the Windows CE Toolkit for Visual Basic or for Visual C++. At present, programs for the Palm-size PC can only be written with VC++ and its toolkit. Microsoft will extend the toolkits soon so that either language can create applications for the P/PC as well as H/PC. One more caveat: Visual Studio Service Pack 3 does not install with the P/PC Toolkit for VC++ existing on the system. One must use VS SP2 to install the whole works or move to SP3 and not develop for P/PC.

Paul Smietan

In a previous message, I gave Paul the addresses of some developer-related Web sites, including Microsoft's Windows CE Toolkit Web site: <http://msdn.microsoft.com/cetools>; CE City developers message board: www.wincecity.com/boards/Developers; HPC Net (go to the Discussion Boards): www.hpc.net. Also, Chris De Herrera has an Internet resources page with links to Developer's Discussion Boards. The developer discussion board links are mixed in with the general ones: www.cewindows.net/other_info.htm

Microsoft has announced the upcoming (mid-2000) release of the latest version of Windows CE (code-named "Rapier"). New Palm-size devices based on this OS will be called "Pocket PCs." I expect that new or updated Windows CE Toolkits for both Visual Basic and Visual C++ will be released before the middle of next year. — Rich

Handheld PC Magazine on the Web

Do you keep the current issue of your magazine on the Internet, or do you only keep past issues there? I have wanted to sample your magazine before I subscribe, and I am scared at the way it gets on the Web so late. Are you slowly dying away, or are you a real live magazine?

Tom Redd

Tom, we are a real live magazine. Our circulation is growing. We place the previous issue on the Web as soon as the current issue hits the newsstand. — Rich

Abandoning the Handheld PC?

I feel you and your magazine are abandoning the Handheld PC. As evidence look at your Nov/Dec issue; it is mostly about palm devices. Don't believe me? Count the pictures. Handheld PCs are in the minority. Count the number of times Handheld PC is mentioned vs. other PC Companions. Handheld PCs are in the minority. From cover to cover, the Handheld PC as distinct from the palm devices seems like an afterthought. Look particularly at your selection of Newsbytes. Articles about Handheld PCs are in the minority. Why does a magazine devoted to Handheld PCs have two cover stories about Palm-size PC? Why does a magazine devoted to Handheld PCs have an article on Casio's E-100 Palm-size PC?

Ray Bleicher

Ray, I apologize for the confusion in the name. We named it Handheld PC Magazine back when handhelds were the only Windows CE

devices. But even in the very first issue we said "For users of Windows CE" right on the cover. We never intended to limit it to the handheld format and started covering Palm-size PCs as soon as they were announced. We will continue to cover both platforms.

Most of the news and major reviews in the Nov/Dec issue covered Palm-size PCs because that's the way it worked out — that's the way the news broke. In the January/February 2000 issue most of the major reviews and articles focused on Handheld PCs. It's going to continue doing that.

The May/June issue will probably coincide with Microsoft's release of the next version of the operating system. Unfortunately, most of the initial devices released will be in the Palm-size format (to be renamed the "Pocket PC"). I keep hearing rumors that HP will release a new handheld. If I can confirm that and get one, I'll review it in that issue. I'm also trying to get NEC's new MobilePro 880.

Whatever we call this magazine, we intend to support both the Handheld PC and Pocket PC platforms. I have an HP Jornada 680 Handheld PC Pro in my pocket and I won't be giving it up.

I very much appreciate your feedback. — Rich

Convert from Lotus 1-2-3 format to Pocket Excel

Is there some kind of loop program which can automatically change my Lotus wk1 spreadsheet files to the format used by Pocket Excel on Windows CE? I used Lotus 1-2-3 for years on my HP 200LX Palmtop PC. If I switch over to the Handheld PC, I don't want to have to convert these files by hand.

Neal L. Spevack

Neal, you used to be able to drag and drop 1-2-3 files from your desktop PC to your H/PC and have them converted to the Pocket Excel format using Windows CE Services. Microsoft recently "improved" Windows CE Services. The new program, now called ActiveSync 3.0, fixed a number of problems with the previous version and is actually much better in many ways. But I noticed that it no longer gives you the option of converting wk1 spreadsheet files to Pocket Excel format when they are transferred from the desktop PC to the H/PC.

Do you have Excel on your desktop PC? You can open a bunch of 1-2-3 worksheets in Excel in one fell swoop. Highlight them all in File Open dialog box and hit Enter. Unfortunately, you have

to save them as Excel files one at a time. I realize you were probably looking for something quicker than that. — Rich

Task list up to snuff?

I am a long time user of HP's 200LX Palmtop PC and I'm strongly considering upgrading to the Jornada 690 H/PC Pro. But my casual review of its Task list has me concerned. I have a ton of to-dos each day (average of 4-5 pages) sorted by priority (I use 20 levels). I also flip from one day to another frequently. I couldn't find the viewing options to give me the same convenience/flexibility in Windows CE. Are you familiar enough with the Calendar and Tasks features in both products to comment on whether I should be concerned? I called HP & they said I could download everything I'd need if it doesn't come with the native Jornada. I hate to depend on add-ons. Your advice would be greatly appreciated.

Ralph Gardiner

Ralph, the Jornada 690 H/PC Pro is a pretty decent handheld, but the Task application built into it does not have as many priority levels as the ToDo list found on the 100/200LX. However, you can set due dates for new Tasks and flip

back and forth between days in Calendar's Agenda view, which shows a day's appointments/events side-by-side with the day's tasks. The Tasks application on all Handheld PCs only has three levels of priority (Low, Normal, and High). This suits me fine, but doesn't come close to your 20 levels of priority. Are you using your 20 levels for more than priority? Are you using priorities to separate tasks into categories (phone calls, meetings, stuff I have to do in the morning, research, etc.). If so, maybe a combination of the three levels of priority and the various categories (Holidays, Ideas, Phone Calls, Suppliers, etc. — you can add your own categories) will work for you.

Hewlett-Packard builds in an application called HP Viewer, which lets you quickly view appointments, contacts, and tasks from one application. But you can't edit or manipulate data from within HP Viewer. There are also a couple of dedicated Contact Manager programs for H/PCs, including Maximizer for H/PCs & P/PCs (www.maximizer.com) and Pocket On-Schedule (www.odysseyinc.com). I don't know much about their Tasks feature and don't have any feedback on that.

The way Microsoft decided to do Tasks is different and will take getting used to. But it

seems to me to have most of the capabilities of the 200LX's To Do List. — Rich

Keeping his and her data separate in Outlook

I own a Jornada 680 and my wife has a Nino 510. When I synchronized her Nino (a recent purchase) with Outlook on our desktop PC, the process combines her Pocket Outlook data with mine in the desktop's Outlook. Even worse when I synchronized my Jornada 680, all of her Contacts and Appointments are downloaded to my Jornada. When she synchronizes her Nino, she gets all my information on her Nino. Is there a way to separate the data from these two devices when we synchronize with our desktop PC? I am currently using Active Sync 3.0.

Albert Angulo

Albert, according to Microsoft technical support, you need to create two different profiles in Outlook. Then, when you attempt to synchronize a device, you will be prompted to select the Outlook profile you want to use (synchronize with). You should be able to find the instructions for creating separate profiles by searching on "user profile" in Outlook's Help screen on your desktop PC. — Rich.




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The Next Generation: Windows Powered "Pocket PCs"

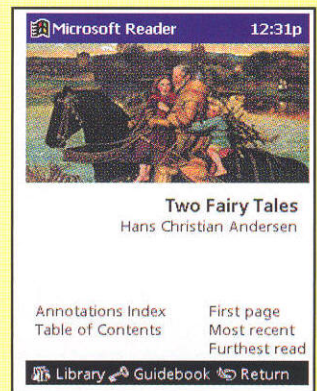
On January 6th at the 2000 International Consumer Electronics Show (CES), Microsoft previewed the next-generation Microsoft Windows CE-based Palm-size PC software and gave the devices a new name: Pocket PCs. Casio, Compaq, Hewlett-Packard, and Symbol Technologies plan to introduce Pocket PCs, the first of which are expected to be available in the first half of this year.

In his CES keynote address, Microsoft's Chief Software Architect (and former Chairman and CEO) Bill Gates demonstrated two new applications that will ship with the Pocket PC: Microsoft Reader with ClearType display technology and the Microsoft Windows Media Player.

Microsoft Reader electronic book software is designed

to deliver an on-screen computer reading experience that approaches the convenience and quality of reading text printed on paper (see Screen). The Windows Media Player gives Pocket PC users access to music in Windows Media and MP3 formats from their own digital music library created with personal jukebox software or downloaded from the Internet. Microsoft has also signed an agreement with Barnes & Noble to develop an online e-book store. For the complete January 6 press release, visit www.microsoft.com/presspass/features/2000/01-06_pocketpc.htm.

Microsoft Reader is designed to display high-resolution images and text, giving a reading experience that approaches the convenience and quality of reading text printed on paper.



Microsoft previews new Auto PCs

At the 2000 International CES, Microsoft previewed new Auto PCs from Visteon and Clarion, using the second version of the Microsoft Windows CE for Automotive operating system. The new operating system will allow Auto PCs to have faster processors, larger displays, and simpler interfaces. Expect to see DVD, MP3, remote control, improved voice recognition and map display, and more. Complete press release at www.microsoft.com/presspass/press/2000/Jan00/WinCEAutoPR.asp.

Askey introduces "Piccolo" Palm-size PC

Askey Computer Corp. will introduce the Askey Piccolo, a low-cost Palm-size PC device with a built-in modem. The Piccolo will hit the market in the second quarter of 2000 and will sell for \$199 via the company's Web site at www.Askey.com. A color, multimedia version of the device will follow.

AOL to Develop Pocket PC E-mail Solution

Industry sources report that America Online will develop an application that will allow users of the Pocket PC to send and receive e-mail from their device. AOL had previously released a beta version of AOL Instant Messenger for Handheld PCs (www.aol.com/aim/wincebeta.html). HP, Casio and Compaq were specifically mentioned in the Pocket PC announcement, but we imagine that the new application will work on any future Pocket PC.

Anti-Virus Support for Windows CE

Computer Associates International and Symbol Technologies have just announced that Symbol will preinstall InoculateIT, CA's comprehensive anti-virus solution for Windows CE in its handheld scanners. There was no indication when or if InoculateIT would be released as a consumer product. The complete press release is at www.cai.com/press/-2000/01/symbol.htm. Contact Symbol Technologies at www.symbol.com or phone 800-722-6234.

Microsoft Joins Bluetooth Wireless Group

The Bluetooth Special Interest Group (SIG) yesterday announced the formation of a nine-member Bluetooth SIG Promoter group. The Bluetooth technology is a specification for enabling low-cost wireless communications and networking among mobile and stationary PCs (including Windows CE devices), mobile phones and other peripheral devices.

The Bluetooth SIG is an industry group comprised of telecommunications and computer companies working together to develop Bluetooth technology and bring products containing Bluetooth technology to market. Nine companies in the Promoter Group guide the evolution and promotion of Bluetooth technology, both within the SIG and the end-user community. The Promoter group includes Microsoft as well as 3Com, Ericsson, Intel, IBM Corporation, Lucent Technologies, Motorola Inc., Nokia, and Toshiba Corporation. For more information on Bluetooth, visit www.bluetooth.com.

GoAmerica appoints industry expert Andrew Seybold to Board of Directors

GoAmerica Communications (www.goamerica.net), a leading nationwide wireless Internet service provider, today announced the appointment of Andrew Seybold, senior partner of the Andrew Seybold Group (and *Handheld PC Magazine* Column Editor) to its board of directors. With more than 30 years' experience, Seybold is recognized as one of the top industry analysts in the microcomputer and communications fields.

Socket and Hewlett-Packard collaborate on Wireless Bluetooth solutions

Socket Communications and Hewlett-Packard have announced a collaborative effort to support the upcoming Bluetooth technology for short-range wireless networking. HP and Socket will work closely together to ensure that Socket's

upcoming line of Bluetooth-enabled single and multi-function CompactFlash CF+ plug-in cards are compatible with the HP Jornada family of Handheld PCs. Socket will also team with Cambridge Silicon Radio in the development of CE-compatible Bluetooth CF cards.

New "fuel-cell" batteries in development

Motorola Labs recently announced the development of a new, miniature fuel cell battery that may one day replace traditional batteries in cell phones, audio players and portable computers. The energy cell is powered by liquid methanol (wood alcohol). The energy storage capacity of the new cells is 10 times that of conventional rechargeable batteries. There is no indication when and if they would be deployed in Windows CE devices.

Transmeta introduces Crusoe CPU

The mobile computing world is buzzing with the news of Transmeta's introduction of Crusoe, an ultra-low power CPU chip that emulates the dominant x86 chips designed by Intel. Transmeta is targeting Internet access devices and sub-notebook computers. Initially it will release two chips. The high-end TM5400 is a 500 or 700 MHz chip designed for PCs running the Windows 95/98/2000 operating system. The lower-end TM3120 is a 333 or 400 MHz chip with the Linux OS built in, aimed at simple Internet access devices.

One of the big advantages of Windows CE devices over notebook PCs is the former's enhanced battery life. Web pads and non-Windows CE handhelds using Crusoe could reverse that advantage. From version 2.0, the Windows CE operating system supported Intel processors. But there's no word on whether a Windows CE device using the Crusoe chip is possible.

A Tale of 3 Palm

We compare the

I love color screens on Palm-size PCs.

They're easier to see and make life more interesting. So when Rich Hall asked if I'd

like to update a previously unpublished

comparison of the Hewlett-Packard and

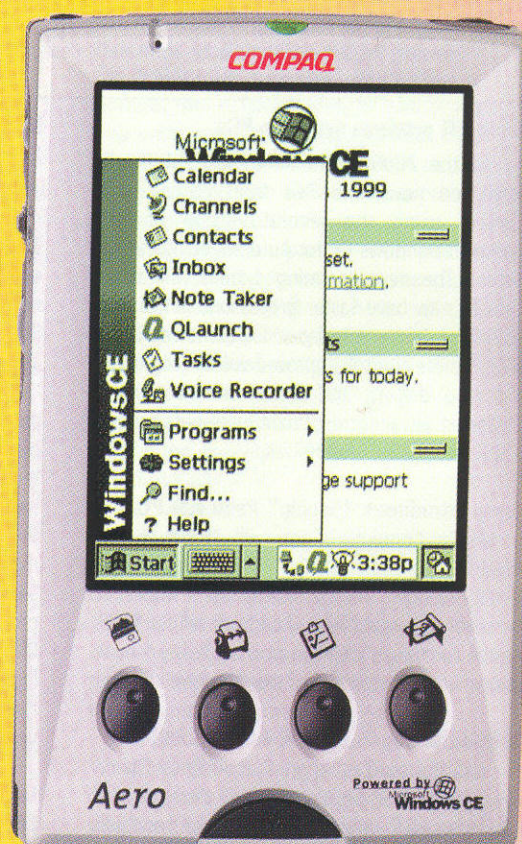
Casio color-screen Palm-size PCs to include

the Compaq Aero 1520 (with its boring

monochrome screen), I thought, "No way

will this stack up against the color screens."

Did I change my mind? Read on.....

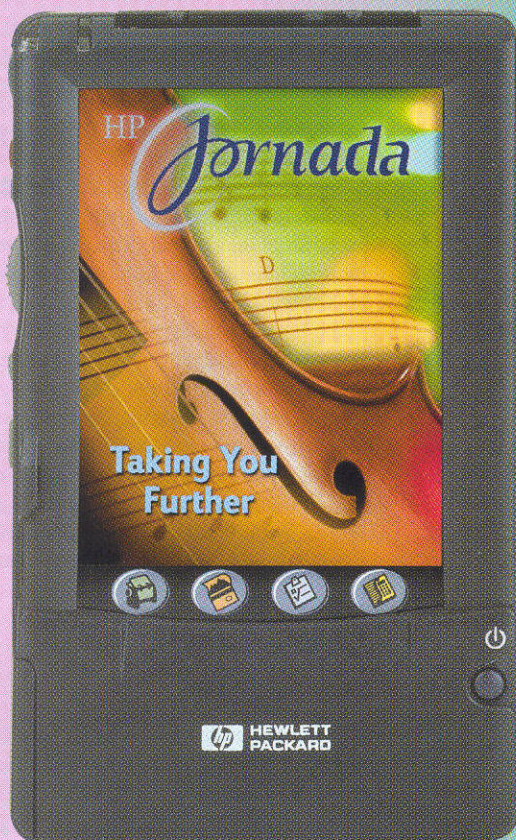


Compaq Aero 1520

BY JIM CHRISTIAN

-size PCs

current Windows CE Palm-size PC leaders



HP Jornada 430se



Casio Cassiopeia E-105

Each of these devices has been reviewed independently in *Handheld PC Magazine* — the Cassiopeia E-100 in the May/June 1999 issue and the HP Jornada 430se and Compaq Aero 1530 (1520) in the November/December 1999 issue. My review will focus on comparing the three.

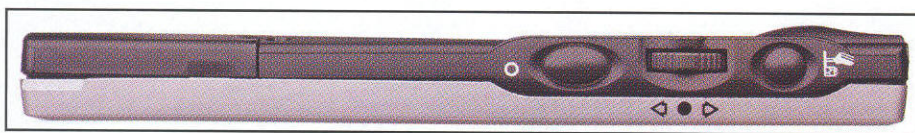
Display

The color HP Jornada 430se has a slightly better screen for use in the daylight than the color Casio. But the monochrome Aero blows both of them away when viewed outside, with its 16 gray-scale semi-transmissive super twist neumatic (STN) liquid crystal display (LCD). I know it's not color, but if you are outside and need to use your Palm-size PC a lot, this is the one to get. Gulp, did I say that? Me, Mr. Color?

Fortunately, Compaq also makes the color-screen Aero 2100 with a similar semi-transmissive screen. The Aero 1520's screen contrast is even slightly better than my Palm VII.

The Aero has a high-contrast grayish-greenish display. I use it inside and outside and almost never have a problem seeing it. You can choose between two settings — Higher Contrast or Higher Picture Quality. It looks like the higher contrast setting is four shades of gray and the higher picture quality is the full 16 shades. The screen looks better to me set on the higher picture quality setting although that probably slows it down a bit. The contrast is easy to adjust. Just hold the EXIT button down (the one below the action knob/wheel/lever/whatever) and push action UP and action DOWN to increase/decrease the contrast. Inside, where Palm-size PCs are mostly used,

A Tale of Three Palm-size PCs



Screen 1: Side view of Compaq's Aero 1520, the smallest and thinnest Palm-size PC available.



Screen 2: The Casio E100/105 joystick-type control button is found on the front left of the unit, below the display screen. It can be used for menu navigation or game playing.



Screen 3: Casio Cassiopeia E-105 with optional Digital Camera Card.

the color-screen units win, and big time.

WINNER INSIDE VIEWING: Tie – Casio E-105 and HP 430se. I love color.

WINNER OUTSIDE: Compaq Aero 1520. It's monochrome, but there's a color-screen version also.

RAM memory

The HP Jornada 430se, Compaq Aero 1520 and Casio E-100 all have 16MB of RAM. The Casio E-105 has 32MB. This is a big difference and a big deal to me. You

always, repeat always, can use more memory.

WINNER: Casio E-105

Physical Size

The Compaq Aero 1520 will spoil you. It's the only current Palm-size PC that comes close to the Palm III, and the only one that I can forget I have in my 40S suit jacket or Nike t-shirt. The other two are OK but the Aero is super-thin: just right — super right, in fact (see Screen 1). Good job Compaq!

WINNER: Compaq Aero 1520, hands down.

"Joystick" and game playing

The Casio E-100 & E-105 come with a hardware joystick-type control button on the front of the unit (see Screen 2). If you're going to spend a lot of time playing games on your Palm-size PC, the E-100/105 arrangement is probably the best. Compaq's Aero 1520 has four quick-launch buttons on the front that can be configured for game playing by a program called QUtilities that Compaq wisely decided to build into ROM. Nice job, Compaq. Hewlett-Packard decided to place its quick launch buttons as soft-keys on the bottom of the screen. This is not an ideal position for game playing.

WINNER: 1st place — Casio E-100/105

2nd place — Compaq Aero 1520

Hardware bundle

HP's Jornada 430se retail bundle includes stereo headphones, a carrying case to clip onto a belt or notebook, a collectible Bond key chain, and a coupon for three free Bond movies. Neither the Aero nor Compaq gave me goodies like this although the Aero had small headphones.

WINNER: HP Jornada 430se

ROM & Cache size

The Jornada 430se has 8MB of ROM versus the Casio's and Compaq's 16MB. The Casio has the largest cache. ROM and cache memory size mean nothing to me, as the speed of the application is all that counts.

WINNER: Casio E-105

Backlighting

I like my backlighting turned all the way up: when I use it, I want to see the screen. I know you can turn it down to conserve batteries, but the whole purpose of backlighting is to see the screen when it's dark. Both the HP 430se and Casio E-105 have good backlighting. The Aero 1520 was disappointing. In direct sunlight it's great, but when you get in a dark room and have to use its backlighting to see the screen, it is almost not acceptable. It can be set to normal or reverse, but they both look poor and can't be seen except in closet darkness.

WINNER: HP 430se and Casio E-105

Hardware switches

All three devices have quick-launch buttons on the face of the unit. In addition, the Casio E-105 has the "joystick" I mentioned earlier. The Compaq Aero 1520 had the best switches of the three devices. They were well located, large enough to find easily, and very clickable. The HP Jornada 430se has the quick-launch buttons silk-screened so they fit beneath the clear cover. I like physical buttons. The next version of the Palm-size PCs (to be renamed "Pocket PCs") apparently calls for a change in the navigation interface that employs the four buttons on the front in an N-W-S-E format to move around on the screen. If this is true, it may be hard to implement an upgrade to any Palm-size PC with four-in-a-line quick launch buttons.

WINNER: Compaq Aero 1520

Camera add-on

The HP and Compaq Palm-size PCs do not have this option. The Casio E-105 does (Screen 3). One can take pictures or videos and send them via e-mail.

WINNER: Casio E-105

Free Outlook 2000

Compaq and HP give you a free CD copy of Outlook 2000 with their Palm-size PC. This is what I use and I love it. Casio doesn't provide it. I'd say Outlook 2000 is worth around \$110 street price.

WINNER: Tie – Compaq Aero 1520 and HP Jornada 430se

Can you really get one?

The HP 430se and Compaq Aero 1520 are really available and you can buy one now. When I wrote this review, the Casio E-105 was

still on backorder because of its popularity. By the time you read this, it may be in stock.

WINNER: Tie – Compaq Aero 1520 and HP Jornada 430se (and maybe Casio E-105)

Carrying Case

I have bought 8 PC Companion cases over the last 10+ years and they are either gathering dust in my closet or I gave them away. Why? When I want my data I want it now! No zippers, no Velcro, no lids, no pockets, no slipcases, NOW! And with a case you now have another thing to lose or carry when the device is out of the case. The HP 430se has a flip-over transparent screen cover AND a case. This is overkill. The flip-cover is sufficient. And if you don't like it, you can remove it. The Casio and Compaq units also come with a carrying case. Toss 'em.

WINNER: HP 430se (use without a case)

Connectivity Cables

Another thing I do not like is the cabling systems on all of them. The HP has both a serial and a power cable and there seems to be no way to separate the two. The AC cord can't plug directly into the HP. The Compaq docking station has a non-detachable sync and a detachable AC cable and the Casio has the reverse. Hey guys, let us carry either around when we travel.

WINNER: None, all do it poorly.

Docking station

The Casio E-105 and the Compaq Aero 1520 both come with a docking station. The HP 430se does not. I like the Aero 1520's best. I don't understand why Casio decided to put a disconnect switch on the E-105's docking station. You have to press it to disengage the E-105 and it seems over complicated. You can purchase an optional docking station for the HP Jornada 430se for around \$20.

WINNER: Compaq

BIG LOSER: HP — with no docking station

Built-in and add-on software

One of the big ways a manufacture differentiates a Palm-size PC from the competition is with additional software. The Aero 1520 comes with QUtilities and QMenu, two applications from Compaq that help users find, switch between and close frequently used applications. This improves the overall manageability of the device. Hewlett-Packard also includes a massive amount of add-on software

with the HP 430se, including the OmniSolve calculator, bTask, HPC Notes (this synchronizes with Outlook Notes), the Hum MP3 player, Sierra Imaging's Image Expert CE, HP Easy Contacts, and HP Voice Contacts. I also like the Voice Contacts application, voice recognition software that lets you speak out a name and pull up a phone number from your Contacts database. I've use this on my HP 690 and it is way cool. The Casio E-105 comes with a fair set of add-on software, but its forté is multimedia.

WINNER, Utility and Productivity:

Tie — HP and Compaq

WINNER, Multimedia: Casio E-105

Which is more secure?

Hewlett-Packard has a superbly designed security system that allows you to specify a time-out period for your password. That is, you can tell it to only ask for a password after (say) 2 hours of inactivity. If it is stolen, your data is safe, but you only have to enter your password once or twice a day. If you forget your first password, you can have it ask you the question, to which you give the correct answer to get into your device. This second password can be an optional user-level password for other people since it lets you use the device but not change the settings.

WINNER: HP 430se



Screen 4: The Casio E-105's Mobile Video Recorder and Player lets you make short videos and play them back.

Backing up data

All include a backup program built into ROM that lets you back up the unit to an optional CF card. I rate any PC Companion without a backup program "Not Acceptable." Why? If you lose you data while traveling, where are you going to get a backup program to load to restore your data?

WINNER: Tie — All three

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Speed

Windows CE Lair performed a speed test on a wide range of PC Companions, using bSQUARE Corporation's bUseful Analyzer. The results are listed on their Web site at <http://pda.tucows.com/wincelair/wince-speed.htm>. Unfortunately, it does not include the Compaq Aero 1520. The HP Jornada 430se is rated as modestly faster than the Casio E-105, but I couldn't notice the difference in real world use. The 70 MHz Aero 1520 did seem a lot slower launching and executing applications. The speed of all three was quite acceptable when looking up an item in my large (1,570 items) Contacts list.

WINNER: HP Jornada 430se

Close second: Casio E-105

Battery Life

The Casio E-105 has a somewhat longer battery life and a much better backup battery than the HP 430se, but small inexpensive spare batteries and external chargers are available for the Jornada. All have excellent rechargeable battery systems. Casio sells additional lithium batteries for \$10 cheaper than the Jornada. The Compaq Aero 1520 claims 14 hours per charge and I believe it. Its monochrome screen draws far less power than the power-hungry screens of the HP and Casio units.

OVERALL WINNER: Compaq Aero 1520

COLOR WINNER: Casio E-105

Close second — HP 430se

Audio Quality

The Aero 1520 has a superb built-in speaker, which plays back voice recordings or audio books clearly and loudly. The 1520

includes AudiblePlayer built into ROM, allowing you to download and play audio books. The 1520 also has a mono headphone jack. Both the HP Jornada 430se and the Casio E-105 come with built-in speakers suitable for playing back voice messages. But they surpass the Aero with their stereo headphone jacks, excellent for listening to MP3 music. The HP 430se also has AudiblePlayer built into ROM and Casio E-105 users can download it for free.

WINNER Built-in Speaker: Compaq Aero 1520

WINNER Headphones: Tie — Casio E-105 and HP 430se (both stereo)

Video

The Casio E-105 is tops in this category. It comes with a built-in movie viewer and has an optional Digital Camera Card that you can use to record your own videos (see Screen 4). I have a copy of the movie *Matrix* that just fits on an IBM 340MB microdrive (a CF-size hard disk that fits in the E-105's CF slot). However, MpegTV (www.mpegTV.com) recently released PocketTV, a free MPEG movie player for Windows CE. This brings the ability to play MPEG videos to any Palm-size PC. Casio, watch out!

WINNER: Casio E-105 — by far, so far!

Printing from a Palm-size PC

Hewlett-Packard offers an optional \$50 parallel printer cable. But there are 3rd party cables and serial-to-parallel adapters available for the Casio and Aero P/PCs.

WINNER: HP 430se

Automobile power adapters

The Casio E-105 and Compaq Aero 1520 have 12V car power adapters available. You can get one for the HP Jornada 430se from 3rd party vendors.

WINNER: Tie — Casio E-105 and Compaq Aero 1520

Web site support

I find the Casio Web site somewhat hard to navigate, but you can usually find the data you're looking for (no FAQs, though). The Compaq Aero site is great and includes some FAQs. But a lot of it requires Adobe Acrobat Reader for the .pdf files, which may be slow for you if you access the site at 33.6K baud. HP's site just stands out over the rest to me. It has everything you would want and is the easiest of the three to navigate.

WINNER: HP 430se

Can these Palm-size PCs be upgraded?

The Windows CE operating system and built-in applications are designed to be able to be upgraded. But it's the hardware manufacturer that must decide whether or not to make the physical upgrade ROM chip. That decision is based on how many of the original units sold as well as how the ROM chip is attached to the motherboard.

In the past, upgrade chips were made available for many (but not all) Handheld PCs. The process was simple. You opened a cover (usually on the back of the H/PC), removed the old chip and inserted the new one. But we've never had an upgrade cycle with the Palm-size PCs. They are much smaller than the H/PCs and it's anybody's guess on what needs to be done to upgrade them. The chips are mostly surface-mount attached, meaning they can't be removed inexpensively. If upgrades were available, the manufacturer would probably require you to ship the device back to them. And I don't think that was ever done with H/PCs. If it is, I think we're talking \$100 to \$150. Here are some other things I've heard or noticed:

Casio Germany has said they will probably upgrade the E-10XG.

See Dennis Wolfe's comments on upgrading the Casio E-100/105 at www.brighthouse.com/ROMupgrade.html.

HP has a history of offering upgrades on their keyboarded handhelds.

The Aero has a rear door that looks like it could be used either for a memory or CPU upgrade.

WINNER: No awards at this time!


Pricing

I did a search of the Internet for the best prices I could find. Here they are, from highest to lowest:

\$573 — Casio E-105
\$431 — Casio E-100 (E-105 with 16MB RAM)
\$419 — HP 430se
\$250 — Compaq Aero 1520

Which one should you buy?

Barring closeout specials on discontinued models, the Compaq Aero 1520 is the lowest priced Palm-size PC on the market. But you already know that I like color displays and own a Casio E-105. If I had to do it over again, I'd probably buy an E-105 or one of the other color-screen Palm-size PCs. I might even wait until the new Pocket PCs are introduced and see what HP, Compaq and Casio have up their sleeve. ■



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bUseful Utilities Pak: The bEST Gets Even Better!

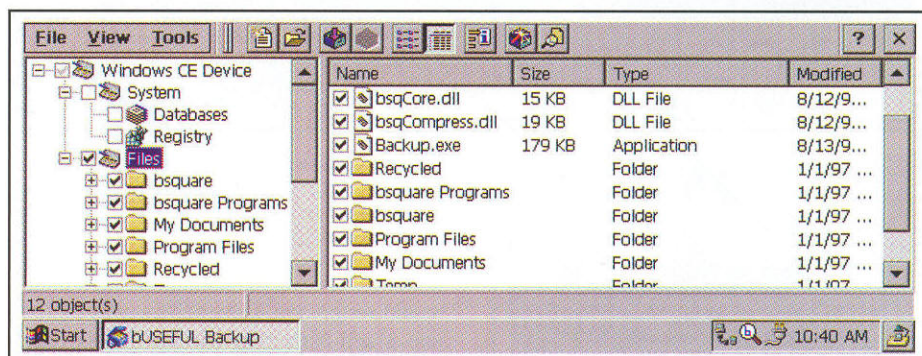
The latest release of the bSQUARE bUseful Utilities Pak delivers new and improved utilities for smoother, safer Windows CE performance.

BY EDWARD ZABREK, M.D.

In the scaled down world of Windows CE, a product occasionally comes along that takes handheld computing to the next higher level of functionality and utility. At this year's COMDEX in Las Vegas, bSQUARE Corporation (www.bsquare.com) unveiled the next generation of its bUseful utility suite. The first release over a year ago was nearly perfect. This one is even better!

The bSQUARE® bUseful™ Utilities Pak is comprised of 10 individual software utilities, including bUseful Backup Plus, bUseful Analyzer, bUseful Zip, bUseful Script, bUseful Scheduler, bUseful Launch, bUseful Notepad, bUseful FindSpace, bTask, and bFind. Taken together, these programs help mobile and IT professionals avoid data loss disasters, achieve benchmark performance, and manage device memory on Windows CE-based PC Companions. A single CD contains software for all currently available Windows CE platforms (H/PC, H/PC Pro, and Palm-size PC), and all processors (from MIPS to SH4). If installed in its entirety, the suite takes up about 2MB.

A year ago I reviewed the first version of the bUseful Utility Pak (see page 22 of the M/A '99 issue of *Handheld PC Magazine*). bSQUARE has enhanced many of the original utilities, but eliminated others. Gone are MoonPhase, List Plus, HTML Editor, and UUEncode. If you want to keep these discontinued programs, you can install the new versions without deleting the eliminated ones. I installed all of the new utilities onto the Flash memory cards in my HP Jornada 680 H/PC Pro and my Compaq Aero 2180 Palm-size PC. The suite functioned flawlessly!



Screen 1: Backup Plus lets you view, back up, and restore all or specific parts of your data on your H/PC, H/PC Pro or P/PC.

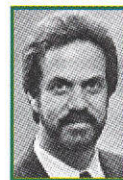
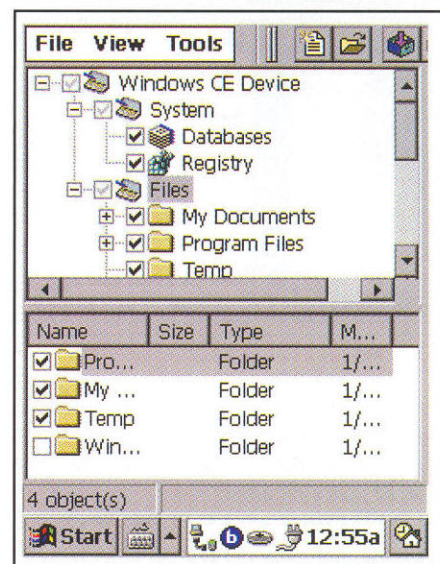
Ten useful utilities

This review will take a look at the individual components of the new suite. Look for "NEW TO ..." for changes that distinguish the new version from the original.

bUseful Backup Plus — alone worth the cost of the suite!

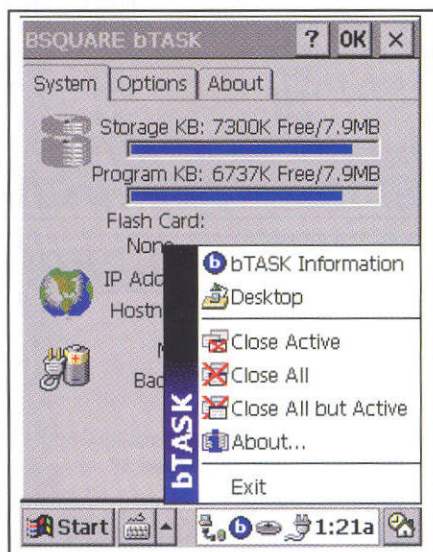
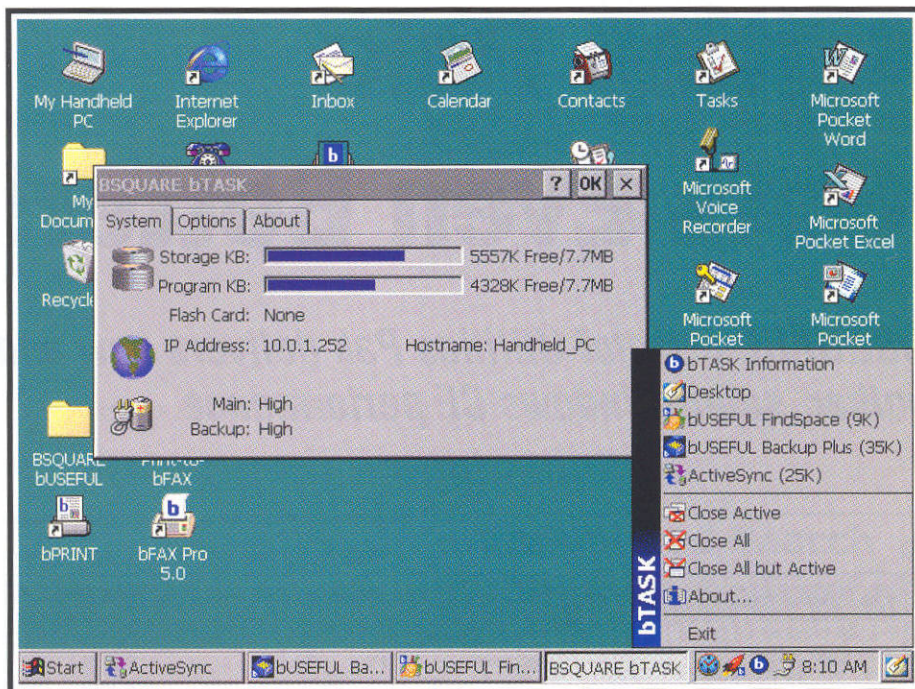
Computer crashes are an unfortunate fact of life. If you use a computer, whether it is a Palm-size PC or a large server, you MUST back up your data frequently or suffer the consequences. You can back up your entire PC Companion using ActiveSync. In addition, many manufacturers include backup programs with their devices. But no matter what you are using now, there is no better backup utility than bUseful Backup Plus! This program allows you to back up, view, and restore all or specific parts of your data (see Screen 1).

The backup is saved on a PC or CF storage card and a complete backup can be accomplished in a matter of minutes (depend-



Ed is Medical Editor of *Handheld PC Magazine*, a practicing obstetrician-gynecologist in Houston, Texas, and chief technology correspondent for OBGYN.NET (www.obgyn.net), a Web site for obstetricians, gynecologists, and related industry persons.

bUseful Utilities Pak: The bEST Gets Even Better!



Screen 2: bUseful bTask lets you navigate quickly between applications and close applications one at time or all at once. It also allows you to view device information including storage card memory and battery status.

could restore the backup. Now you can create a self-extracting backup that is like a mini-executable file. You click on it and it does the restore all by itself. The self-extracting backups are also an ideal way to "clone" data files, or PC Companions. Configure the H/PC or P/PC the way you want it, use bUseful Backup Plus to create the self-extracting backup file, and then distribute that file to others. A single PC card can create an unlimited number of identical devices with simplicity and ease.

Use the bUseful Backup Plus utility after making any changes to your data. I recommend that you change your self-extracting backup whenever you add or remove software on your unit.

bTask

bTask supports H/PCs and H/PC Pros, but is particularly useful on the Palm-size PC. In fact, if you use a Palm-size PC, bTask is indispensable. One of the inherent shortcomings of the current P/PC interface is the inability to close open applications. bTask allows you to navigate quickly between applications and close applications one at time or all at once. Many manufacturers are not adding this or a similar utility directly to the device. I have not found these programs to be as complete as bTask when you com-

pare the look, feel and features. bTask also allows you to view device information, including storage card memory and battery status (see Screen 2).

NEW TO BTASK: Has an improved, more graphical user interface (see Screen 2).

bUseful Analyzer

This utility evaluates and analyzes every portion of your PC Companion's system, including CPU information, power management, video, battery life, and more. Analyzer evaluates performance by using any of a number of industry-standard benchmarks, including Drystone, Whetstone, Bizstone, Graphstone, Thinkstone, Memstone, or a combination of all of the benchmarks.

Analyzer can be useful when comparing various CE devices. This feature is an easy way to test the speed of your machine. This analysis takes a while to complete. (I recommend using this utility while on AC power.)

NEW TO ANALYZER: New version includes support for the latest SH4 and MIPS architectures.

bUseful FindSpace

bUseful FindSpace saves space on your PC Companion by identifying and deleting unnecessary files from your PC Companion (such as duplicate files, invalid shortcuts, temp files, cache files, etc.) When you uninstall a piece of software from your PC Companion, the process sometimes leaves pieces of the programs "lying around" taking up file storage space. Graphics and HTML files are saved in a cache when you browse the Web. And it's easy to save duplicate copies of the same document you're working on. FindSpace helps you find and delete unnecessary files, freeing up storage space in the process (see Screen 3).

If you have a large number of files, or a number of large files on your device, it can take some time to run FindSpace. The process can eat up battery life, so connect up to your AC adapter before you look for that extra space on your PC Companion.

NEW TO FINDSPACE: The new version incorporates a new, easy-to-read user interface, the ability to repair registry problems, results charting, and more.

bUseful Script

bUseful Script is a simple macro writing utility that allows you to automate routine tasks such as logging onto an ISP, retrieving e-mail, and more. You can easily learn the bUseful Script language with the handy script editor that inserts common commands for you.

ding on the number and size of your files). Files are automatically compressed by about 70% during the backup, minimizing the storage space required.

NEW TO BACKUP PLUS: When you back up your data, a wizard gives you the option of including the contents of your PC/CF storage card in the backup. This feature takes the confusion out of performing a "complete" backup. Also, the new version has a "self-extracting" backup option. In the previous version of bUseful Backup, if you had a total system meltdown (i.e., you lost everything on the PC Companion) you had to re-install bUseful Backup before you

NEW TO SCRIPT: New version incorporates support for Jscript and VBscript for full macro capabilities, such as application launch and usage.

bUseful Scheduler (new to the suite)

Works in concert with bUseful Script to schedule device tasks. For example, you can create a script to automate a task (such as logging onto an ISP) with the bUseful Script utility. Then you can use bUseful Scheduler to schedule the task occurrence. Or you could use bUseful Scheduler with bUseful Script to check e-mail every 30 minutes, or with bUseful Backup to automatically back up your device every Friday. There are a lot of possibilities with this one.

bUseful Scheduler can run programs once, every X minutes, daily, weekly, or monthly, and schedule multiple events. There is no need to turn the machine on—Scheduler can run events even when the device is off.

bUseful Launch

bUseful Launch is a cool utility that adds a customized start menu for rapid launching of your most used programs, folders, files, Web sites, and more! The Launch icon resides on the right side of the taskbar (a.k.a. "system tray"). Tap on the icon and a menu of applications pops up. Tap a selection to launch an application. Add whatever application you like to the menu. If you use a Palm-size PC you will love this utility!

bUseful Notepad

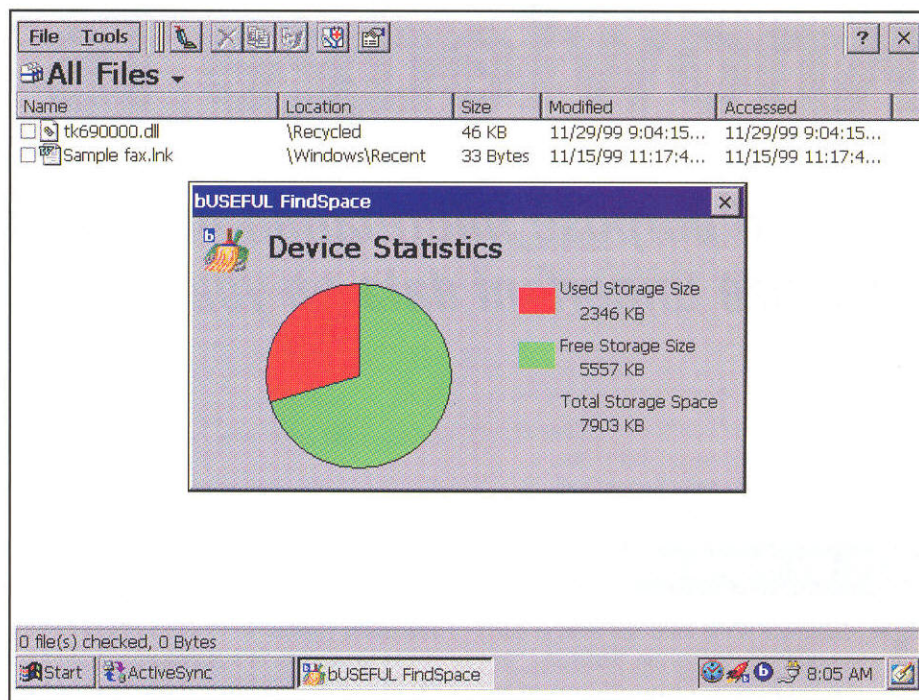
bUseful Notepad is a simple text editor—a quick and easy method for creating and editing text files. bUseful Notepad opens and saves text in ASCII (text-only) format and in Unicode format on your Windows CE device. Its "Word Count" feature tells you the number of words in a document.

bFind

bFind is an extremely useful global-find utility that lets you search the contents of your PC Companion for files by name or for files containing specific words, phrases, character strings or file names. bFind lets you search your entire memory (including storage cards) or specific locations in your memory (Calendar, Contacts, Appointments, e-mail messages, and more).

bUseful Zip (new to the suite)

bUseful Zip adds industry-standard file compression and archiving capability to PC Companions. You can view the contents of a Zipped archive, extract individual (or all) files



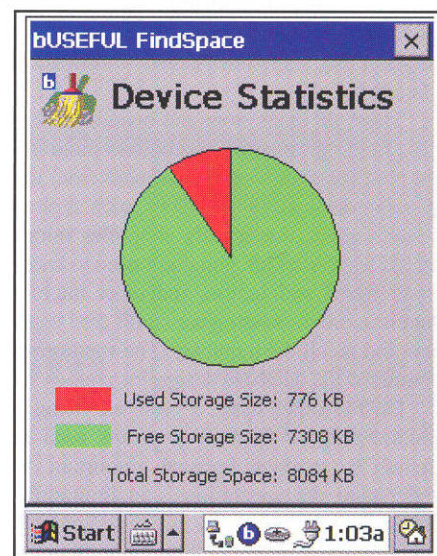
Screen 3: bUseful FindSpace saves space on your PC Companion by identifying and deleting unnecessary files.

from the archive, zip a group of files to reduce file size for e-mailing or storing on your PC Companion, and more. It creates Zip files compatible with WinZip and other Zip utilities for DOS and UNIX. It even lets you encrypt files that are being added to a Zip archive.

Almost flawless

As I already said, the first release of bUseful Utility Pak was near perfect and this one's better! bUseful Backup Plus, Analyzer, FindSpace, Script and bTask have all been improved, and bUseful Scheduler and Zip have been added, making this second version almost flawless. If you only buy one third-party software program for your PC Companion, bUseful Utilities Pak is the one.

bsQUARE bUseful Utilities Pak is available for Palm-size PC, Handheld PC and Handheld PC Professional edition PC Companions. Suggested retail price is \$59.95 for all ten utilities. bUseful Utilities Pak is available from the bsQUARE online store at www.bsquare.com and other bsQUARE resellers. It's unclear what the upgrade price will be for owners of version 1.0. For further information, visit bsQUARE's Web site at www.bsquare.com or call 888-820-4500. ■



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Knowledge is Power

General purpose information managers make it easier to organize important data on your PC Companion.

BY DAVID SHIER

This article is the third and final in our introductory series on databases. In the last issue we discussed large-scale business databases. This time, we will cover commercial database products designed for personal use, sometimes called "Information Managers."

These products store and organize information using an internal database program, but hide the details of the database from the user. For dedicated applications, such as electronic wallets, this greatly simplifies things for the user. After all, you don't need to know about tables and indices and other internal details in order to store your credit card numbers and recall them quickly. The vendor has optimized the database design for you.

On the other hand, if you are using a general-purpose database program, such as VisualCE, it does become important to understand the capabilities and limitations of the database engine.

Because there are so many programs for Windows CE that use the database engine, I have elected to discuss a representative sam-

pling to show the many ways a database can be used.

Electronic Wallets

A logical use of a Handheld or Palm-size PC is to keep handy the information on all your credit, bank and other cards. In the past, I had a constant battle with my wallet - I hated the idea of a thick billfold, but I was always finding more and more cards and other papers accumulating in it. In the absence of "Smart Cards" I doubt that anyone expects to fully replace their wallet, but an electronic wallet program can certainly reduce the bulk.

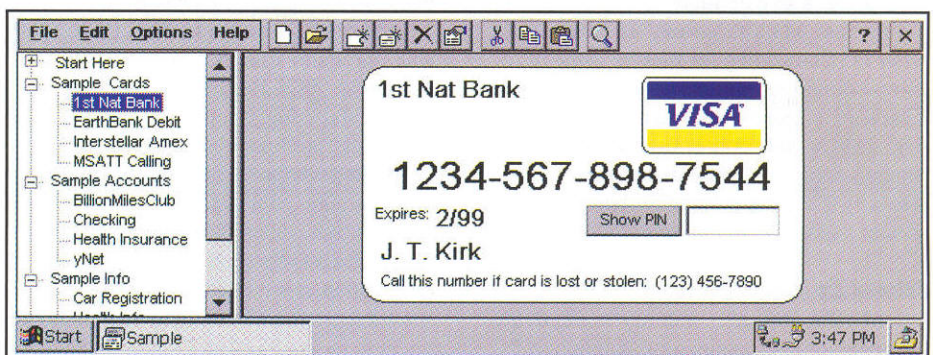
In this category I especially like eWallet (Screen 1) from Ilium Software (www.iliumsoft.com). It allows me to store and sort many of the cards that I rarely use. eWallet includes fields for PIN numbers and passwords that are initially shown blank so that you don't have to worry about someone looking over your shoulder (or having the PIN on your ATM card displayed when you are demonstrating this program to a friend.) In the new version, eWallet includes a number of new card forms, including such things as passports and frequent-flier accounts.

General Database

As noted in the last issue of *Handheld PC Magazine*, VisualCE is the best solution for creating a multitude of general-purpose databases on the Windows CE device. Its developer, Syware (www.syware.com) recently announced a new version of VisualCE that incorporates more controls and uses color better. With VisualCE, not only can you design a database directly on the PC Companion, you can synchronize your custom database with a desktop database (the desktop copy of VisualCE, Microsoft Access, or another standard database engine). One note of warning: If you intend to connect a desktop database other than the Desktop VisualCE, you will need to duplicate the database design in the desktop application. Therefore, it is an excellent idea to think about your design and document it before you start your table layouts. However, if, for example, you want to create a simple database to track your expenses (see Screen 2) or organize your music CD collection, VisualCE is an excellent way to do it, and one that eliminates the need to define the tables twice.



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Screen 1: eWallet is an electronic wallet program that lets you store information about credit and calling cards, passwords, PIN numbers, account and serial numbers and much more, in an easy-to-read format. The data is encrypted and password-protected for security.

Database Information Managers

This sidebar lists and briefly describes the various personal database programs available to Windows CE users. It does not list database utilities.

Abner: Pocket Scorecard for Windows CE – Baseball enthusiasts and statisticians can keep score and analyze baseball statistics. Freeware (beta); Use with: H/PC; Demo or download available; Golem Software; www.golemsoft.com; E-mail: webmaster@golemsoft.com.

Bills and Reminders – Keep track of bill payments, due dates and other important things. After you enter the date, frequency, description and amount due for each bill, the program keeps a running total of what you owe and when payment is due. \$19.95; Use with: H/PC & P/PC; Boma Software; www.bomasoft.com.

ClassPro – Student organizer that lets you track classes and display class information, schedule tasks and take notes. Can be used as an organizer for non-student activities and notes. \$24.95; Use with: H/PC; Developer One Inc; www.developerone.com.

CLC Journal for Windows CE – Quickly look up your legal, medical or engineering notes. Track technical problems and how you have resolved them or simply keep a personal password protected electronic diary. CLC Journal for Windows CE fills the voids and allows you to keep it completely synchronized with Microsoft Outlook 97/98/2000 Journal. \$34.95; Use with: H/PC, P/PC; Crown Logic Corporation; www.crownlogic.com.

CodeWallet – Manage your important personal, financial, and business information. CodeWallet lets you securely and conveniently store information for instant access. \$24.95; Use with: P/PC; Developer One Inc; www.developerone.com.

CSI Outliner – Organize notes, lists, to-do items, and meetings. Expand and collapse subtopics for a better view. Use the simple drag-and-drop interface and auto-renumbering feature to arrange (and rearrange) entire outlines quickly and effortlessly. Embellish and illustrate your notes with sketches and images. Export to desktop applications. \$39.95; Use with: H/PC, H/PC Pro, P/PC; Casio Soft; www.casiosoft.com.

CSI Project – Project management software that lets you work with Microsoft Project-compatible project schedules. Includes fully functional GANTT charts, resource and budget allocations, milestones, priorities, and task linkages. \$79.95; Use with: H/PC, H/PC Pro, P/PC; Casio Soft; www.casiosoft.com.

eWallet – Keep your credit and calling cards, passwords, PIN numbers, account and serial numbers and much more, convenient, easy-to-read, and encrypted and password-protected for security. \$10.00; Use with: H/PC, H/PC Pro, P/PC; Demo or download available; Ilium Software; www.iliumsoft.com.

Friend Indeed – Store and monitor personal information such as blood pressure, blood sugar, pulse rate, vehicle mileage, etc., and further analyze them over a period of time. Shareware: \$10.00; Use with: H/PC, H/PC Pro, P/PC; Demo or download available; ITIL; www.itil.com.

Golfwits – Record your play (and that of up to three other golfers) on a detailed map of each hole while Golfwits automatically posts your score and tracks your statistics. \$49.95; Use With: P/PC; Download or demo available; Siscosoft Corp; www.golfwits.com.

HPC Customer Manager – Keep track of customer contact information, including name, company name, address, phone and fax number, Web site address, reseller number and more. Track multiple contacts for each customer. \$24.95; Use with: H/PC; Boma Software; www.bomasoft.com.

HPC Notes 3.0 Lite and Standard Editions – Create notes and provide them with type, subject, creation and modification date, which helps to find required information quickly and easily. With HPC Notes you can search for specific text in a specific field and sort notes by type, date or subject. You can protect notes from unauthorized access with a password and send e-mail messages directly from the Note Editor. Interface to the Contacts Database enables you to pick an e-mail address instead of typing it in. HPC Notes uses a compressed database, saving limited storage space. HPC Notes 3.0 Standard Edition includes a synchronization module for Microsoft Outlook 9X/2000. (FREE upgrade for all registered users of any version of HPC Notes.) \$19.95 (Lite); \$39.95 (Standard); Use with: H/PC, P/PC, H/PC Pro; Demo or download available; PhatWare Corp; www.phatware.com.

IntelliGOLF – Automates golf scoring on all Palm-size PCs, capturing game improving statistics, and tracking wagers using any of the 17 included side games (e.g. Skins). \$29.95; Use with: P/PC; IntelliGolf; www.intelligolf.com.

ListPro – Organize information in handy lists on any of your Windows CE or desktop PCs. Keep trip packing lists, supplies needed, steps in a project, videos to rent, and much more. Newest version adds sub-items, dates, and complete column customization. \$19.95; Use with: H/PC, H/PC Pro, P/PC; Demo or download available; Ilium Software; www.iliumsoft.com.

MediaWallet – Protects and organizes all your personal information. Find important information fast: notes, images, cards, applications, audio, text and HTML. \$39.95; Use With: P/PC; Download or demo available; Applian Technologies; www.applian.com.

NBAInPocket – Record and maintain statistics of Basketball games, teams and players. \$10.00; Use With: P/PC; Download or demo available; ITIL; www.itil.com.

Note Writer – Use the H/PC to write, organize and read notes. Each note has a title, category and date field, letting you find information quickly and easily. Shareware \$34.00; Use with: H/PC; Demo or download available; PDA Central; www.pda.tucows.com.

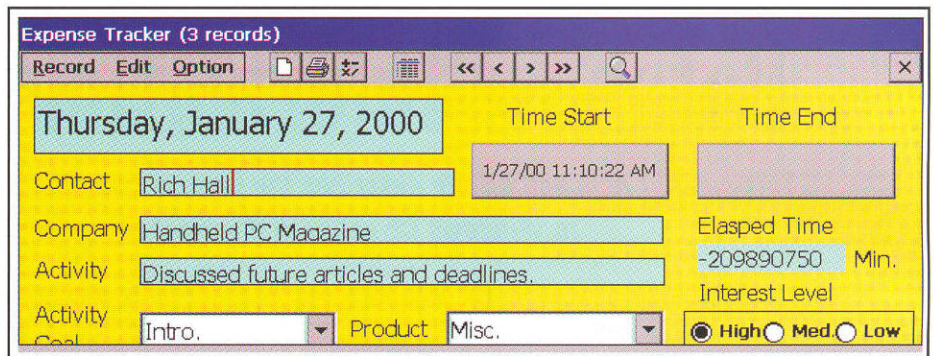
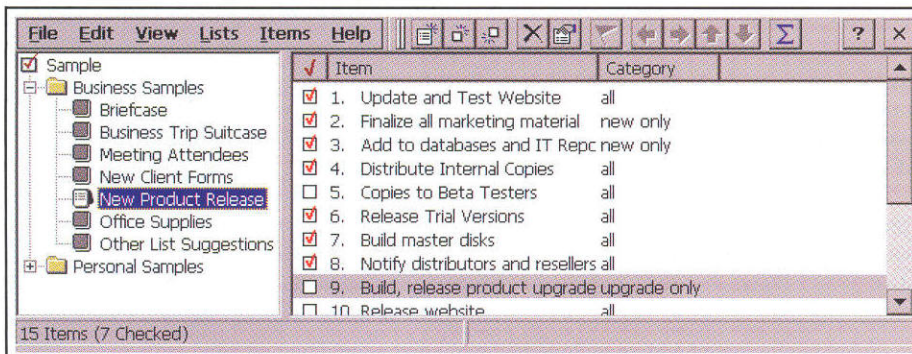
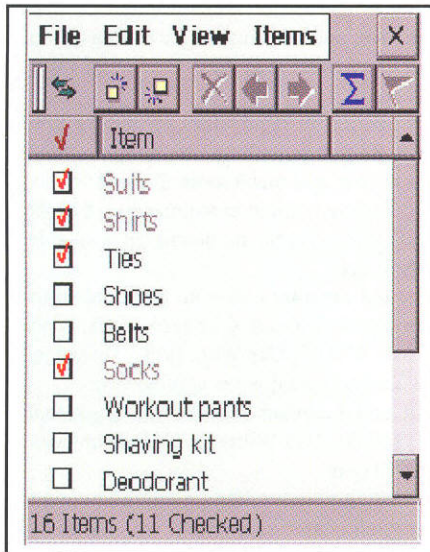
PassKey – Store all of your password and registration information in one easy to use database. PassKey stores this sensitive information in an encrypted database. Shareware: \$15; Use with: H/PC, H/PC Pro, P/PC; Demo or download available; AppStudio; www.appstudio.com/.

PocketCaddie – Do simple scorekeeping and individual shot recording. Course layout, notes, ratings, yardage, etc. may be recorded and saved. \$25.00; Use with: H/PC, P/PC; Demo or download available; Softscribe Development; www.softscribe.com.

Continued page 19

The professional version of VisualCE allows you to design databases that you can distribute to Windows CE users who don't have their own copy of VisualCE. While the end user won't be able to modify the database design, this is a very cost-effective solution for certain enterprise applications. It makes the distribution of simple "free-ware" databases practical. For example, you can download a free Expense Tracker developed using VisualCE from Syware's Web site (www.syware.com/wce/vce.htm). In future issues of *Handheld PC Magazine*, together with support from Syware, I will be making available other database templates for you to download. The first one I'm working on is a Mileage Account database. When I fly frequently, I don't often pay close attention to when my mileage is credited to my frequent-flyer accounts. This is especially true when flying on "partner" airlines, or staying at hotels that provide mileage credit. I want to design my Mileage Account database to let me log the trip and provide a check-box to indicate that the mileage has been credited to my account.

Another general-purpose database ap-



Screen 2: Syware's VisualCE lets you create simple or complex database applications for your H/PC, H/PC Pro or Palm-size PC. Shown here on both an H/PC and P/PC display is a simple expense tracker create with VisualCE.

plication is ListPro, which, like eWallet is from Ilium Software (www.iliumsoft.com). ListPro allows you to create lists of all sorts of things. Their samples include shopping lists, to-do lists, music CDs, and many more — all contained in a single "outline style" database (see Screen 3). Each list item can have a number of attributes including priorities, notes and custom fields. While I personally prefer the more complex form style of VisualCE, ListPro is much easier to work with when adding new categories of data to store and sort. If you like to create "ad hoc" lists of things to organize your work and life in general, I'd recommend having a look at ListPro.

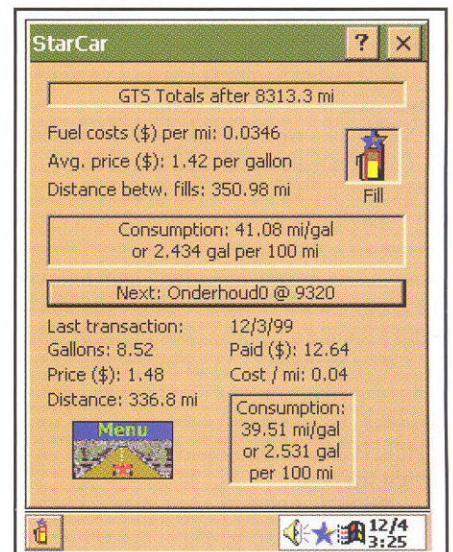
Specialized Databases

There are a number of databases available for Windows CE that address specific applications. While prices vary from free (or a few dollars as shareware) to over \$1000, in general what you are paying for is the application-specific knowledge that went into the design.

Screen 3: ListPro allows you to create lists of all sorts of things. Their sample lists include shopping lists, to-do lists, music CDs, and many more.



StarCar from Thumbs Up Software (www.thumbsupsoft.com) is a nice example of this type of database. It provides a place for entering automobile expenses and other



Screen 4: StarCar is an example of a specialized database program that can be used to track and organize expenses and other automobile-related data.

Database Information Managers *continued from P. 17*

Pocket Database – Store information in a database. View databases in List or Card format. Advanced features include in-place editing, saved column widths and multi-line editing in List or Card mode. Includes a number of sample databases. \$32; Use with: H/PC, P/PC; Surerange Analysis Ltd; www.surerange.com.

Pocket Notes 2000 – A multipurpose note taker that can remind you of upcoming events and due dates, take notes, manage your contacts, and create predefined template files. Includes 11 quick access buttons, password protection feature, and more. Freeware; Use With: H/PC, P/PC; Imperious Software; www.crosswinds.net/~imposoft/About.htm

PowerGizmos – A collection of simple information managers. Includes: CDGizmo (\$14) – catalog your audio CDs; DiaryGizmo (\$11) – record your diaries; GiftListGizmo (\$14) – record and manage your gift lists; GroceryGizmo (\$19) – record and manage your grocery lists; HouseHuntGizmo (\$19) – record and compare features of houses for sale; MeetingGizmo (\$19) – plan and manage your meetings; MessageGizmo (\$14) – store and organize your messages; MortgageGizmo (\$14) – Track and compare mortgage rates; VideoGizmo (\$14) – Catalog your video tapes. Not available for HP Jornada 820. Use with: H/PC, H/PC Pro, P/PC; Demo or download available; PowerGizmo Technologies; www.powergizmo.com.

QuickWallet – Store and encrypt vital personal information on electronic cards. QuickWallet is a database with up to 400 standard cards (i.e., categories of data) and a single text screen associated with each card. Contains an auto-dialer, image viewer, audio organizer, and other handy tools. A commercial version that includes password protection is also available. \$149.95; Use with: H/PC, P/PC; Applian Technologies; www.applian.com.

Recordian – Track your project, car, health, home, perks and other records. Easily record your info, and have it with you right when you need it (formerly Automate). \$24.95; Use with: H/PC, P/PC, H/PC Pro; Demo or download available; Ilium Software; www.iliumsoft.com.

ScorePro – Track your golf score, recalculate all totals automatically and keep the grand total of bets if playing mul-

tiple games. \$39.95; Use with: H/PC; Sandtrap Software; www.scorepro.com

ScoreWise – Easy-to-use golf score card and statistical analysis package that keeps track of all your courses, players, and rounds; keeps notes about each hole; and provides statistical reports showing your strengths and weaknesses. \$34.95; Use With: P/PC; Download or demo available; Prevalent Technologies Inc; www.prevtech.com.

Serial Numbers – A simple information manager for maintaining the serial numbers of software, devices and other things. Shareware: \$9; Use with: H/PC, P/PC; Softwarebüro Müller; www.sbm.nu.

ShopList – Track shopping lists and check things off as you put them in your shopping cart. Freeware; Use with: P/PC; Demo or download available; palm-size.com; www.palm-size.com.

StarCar – Collects and displays information on the user's automobile. From gas and oil to payments and taxes, it can all be entered, graphed, categorized, and listed. Import and Export to spreadsheets, too. \$15.00; Use With: H/PC, P/PC, H/PC Pro; Download or demo available; Thumbs Up! Software; www.thumbsupsoft.com.

StatsNOW – Collect and analyze basketball stats. \$49; Use with: H/PC, P/PC; G. Mason; www.pbfonline.org/StatsNow

TapeMinder – Organize videotapes, movies and programs by tape, program title, category, status, and more. \$10.00; Use with: H/PC, H/PC Pro; P/PC; Demo or download available; Ilium Software; www.iliumsoft.com.

Travel Manager – Manage your travels and capture travel-related information. Capture costs and location descriptions; archive pictures for each journey or event and assign sound comments to each record and to each picture. \$29.95; Use With: H/PC; Download or demo available; VCA Systems; www.aaa-software.com.

The Safe – Organize serial numbers, online passwords, credit card PINs and other things. All the data can be protected by real encryption — not only password protection. \$19; Use with: H/PC, H/PC Pro, P/PC; Demo or download available; Softwarebüro Müller; www.sbm.nu/.

Visual CE Personal Edition – a visual development environment that lets users create databases and forms-based applications. The applications can be used to collect, display and modify data on an H/PC. Other versions of VisualCE are available with prices varying from \$79 to \$599. \$129; Use with: H/PC, H/PC Pro, P/PC; Syware Inc; www.syware.com.



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Par	3	4	5	All
Ave. Score	3.4	4.7	5.2	4.5
Ave. Putts	2.2	2.2	2.0	2.1
Ave. Putts, GIR	2.0	2.5	2.0	2.1
Ave. Drive		257	242	252
Long Drive		266	254	266
% Greens	80	50	80	66
% Fairways		75	20	53
% Sand saves		33		33

Screen 5: IntelliGOLF is one example of programs that can track your golf scores, calculate approximate handicaps and allow you to review your trends. There are similar programs for baseball and basketball.

related data that is needed for anyone who uses their car for business (see Screen 4).

While their general-purpose ListPro can be used for the same thing, Ilium Software also sells an application called TapeMinder that is specifically designed for keeping track of your video tape library. TapeMinder has more targeted tools that provide such features as keeping track of blank space on your tapes and VCR counter settings to help you quickly find a specific program on a tape that has multiple recordings.

PhasTrak from IMS Health Strategic Technologies, which I discussed in detail in my last article, is a sophisticated application for pharmaceutical sales-force automation.

Finally in this category, I should not ignore the fact that life is not all about work. IntelliGOLF Par CE Edition (www.intelligolf.com) is one example of programs that track your golf scores, calculate approximate handicaps and allow you to review your trends (see Screen 5). There are similar programs for baseball and basketball.

Database Utilities

While not specifically databases, these programs are important to note here since they are valuable tools for anyone who works with databases on their Windows CE device. Most of the database utilities solve a few of the common problems and frustrations with the Windows CE Database engine. dbExplorer is a good example. I mention it here because of its utility and its price: it's free as a download from www.vcce.com (a resource Web site for Windows CE Visual C++ programmers). dbExplorer allows you to view, delete or rename the databases on your Windows CE device. You may find you need such a tool because there is no way to do these tasks using any of the functions built into the device. This is because, unlike Windows on the desktop, Windows CE databases do not exist as "files" on a disk. They share the memory space with your file storage system, but are stored differently. Of course, a "well behaved" database application should give you a means of cleaning up after yourself. However, "stuff" happens! You might have tried a shareware program that you decided wasn't what you wanted. If you removed the program from your Windows CE device before you remembered

to delete its associated database(s), you might be left with some "junk" on the device. In this case, you can use dbExplorer to delete the database(s).

A word of caution is needed here: never use a database utility program if you are not absolutely sure you know which databases can be removed or renamed. It's also an excellent idea to do a complete backup of your machine before you use such a program. You can do this using ActiveSync, or on some machines, such as the Jornada series from Hewlett-Packard, there is a utility built in the device to quickly backup the system to a PC or CF card.

Another tip is to remember that there is a "Remove Programs" uninstaller on the Windows CE Control Panel. You should always try this before trying to simply delete the program file from the device manually. When a program is removed via the control panel, it should clean up after itself, by deleting any proprietary databases and libraries that are no longer needed (and getting rid of application-specific system registry entries).

While this is the final article in this series, it is obvious that database applications are a major topic for handheld computing. Therefore, I will be writing a regular column dedicated to databases including new products and application success stories. ■

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What's That C:\ Doing On My PC Companion?

PocketDOS lets Handheld and H/PC Pro users run DOS applications on their PC Companion.

BY RICH HALL

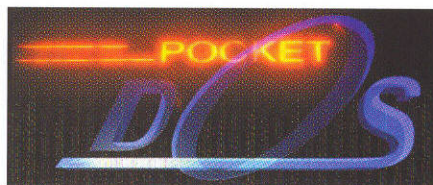
Microsoft has been talking about eliminating DOS from their desktop PC Windows operating systems for years. But you can still get to a DOS prompt in Windows 2000 because of pesky "legacy systems." These are ways of doing things inherited, as a legacy, from the previous MIS director, CEO, or whoever. They are systems designed years ago (5 to 15) when DOS was king, and may involve old DOS programs that still do the job. In fact, some of those old DOS programs do the job better than their modern counterparts. That's one of the reasons why MIS guys (and gals) and CEOs don't want to let go of their legacy systems. And that's why you can still get to a DOS prompt in the desktop PC versions of Windows. Unfortunately, that's not the case with Windows CE.

When Windows CE was a brand new operating system three years ago, Microsoft decided that you wouldn't need to access DOS programs. They planned to build in most of the applications you'd need and figured independent software vendors would develop additional programs for the new operating system.

Well, one of the very first and most consistent "suggestions" I read on Windows CE newsgroups was that Microsoft include DOS capability in subsequent releases of Windows CE. They didn't and I was told that because of the design of Windows CE, it was not possible. Tell that to the developers of PocketDOS!

PocketDOS

PocketDOS turns your Windows CE H/PC (or H/PC Pro) into a DOS-compatible computer, letting you run many DOS appli-



cations and games on your H/PC. PocketDOS does two things: First, it creates an emulation of an 8086/80186-compatible computer on your H/PC. These were early DOS computers. Then it runs an MS-DOS 6.22-compatible version of DOS within that emulation, on your Microsoft Windows CE

your desktop PC. The installation routine senses your hardware specifications and configures PocketDOS for your H/PC. The installation process was simple and worked without any problems on my HP Jornada 680 Handheld PC Pro. It created the necessary directory on my Jornada, copied over the necessary files, and placed the PocketDOS start-up icon on my H/PC's desktop screen. It even created the necessary AUTOEXEC.BAT and CONFIG.SYS files — remember those? Note that you may have to modify the AUTOEXEC or CONFIG to get some DOS programs to work in PocketDOS. Important:

Some of those old DOS programs do the job better than their modern counterparts. I was told that because of the design of Windows CE, it was not possible include DOS capability. Tell that to the developers of PocketDOS!

H/PC (or Psion/Symbian EPOC32-based Pocket Computer).

Install and run PocketDOS on your H/PC and you get a black screen with a DOS prompt at the bottom. From there you can run most DOS applications designed to run on an Intel 8086 or 80186 compatible processor and display as text or on a CGA monitor. PocketDOS also lets you access devices such as touchscreens, built-in and external modems, IR ports, flash disks, network drives and more from within DOS and DOS programs.

Installing and running PocketDOS

Connect your H/PC to your desktop PC and run the PocketDOS Install routine on

Modify them if you have to, but don't delete or replace the AUTOEXEC or CONFIG files installed by PocketDOS.

Running a DOS game on my H/PC

After installing PocketDOS, copy the DOS programs you want to run to your H/PC. I immediately copied a couple of old DOS games over to the Jornada 680 and opened PocketDOS. I was using the free demo version of PocketDOS, which has an annoying start-up screen that counts to 30 before showing you the DOS prompt. But a DOS window popped up occupying the entire screen (see Screen 1).

DOS program files end with a .EXE or

What's That C:\ Doing on My PC Companion?

```
Starting PocketDOS (Revision 1.00.0)...
DOS drive letters are set as:
B: is "\Program Files\PocketDOS"
C: is "\Storage Card1"
D: is ""
Type: SETDRIVE /? for more information.
Use SETCOM to configure DOS COM ports.
Type: SETCOM /? for more information.
Press the "Windows" Key for special functions:
[Win]+1...0=F1...F10 [Win]+[arrow key]=PgUp/Dn/Home/End
[Win]+Backspace=Del [Win]+Del=Backspace
[Win]+Space=Insert [Ctrl]+[Win]+Esc=[Ctrl]+Break
[Win]+Enter=Cycle through screen zoom modes
[Ctrl]+[Win]+Enter=Cycle palette (greyscale display only)
[Win]+Tab=Switch to WinCE [Win]+Esc=Exit PocketDOS
[Ctrl]+[Win]+Del/Backspace=Restart PocketDOS
To exit PocketDOS, type: EXITDOS
C:\>_
```

Screen 1: The PocketDOS opening screen displays which drive letters are associated with which folders or storage cards (top of screen). It also displays a summary of how you access the F1-F10 keys and other special keys used in DOS. At the very bottom of the screen is the C:\> prompt.

YAHTZEE		Score Card	
ver 1.11 by c.cameron Q to quit		4 3 of a kind	18
		4 4 of a kind	25
		9 Full House	25
		4 Small Straight	30
		10 Large Straight	40
		24 Yahtzee	50
		55 Chance	24
		Right Total	212
		55 Grand Total	267

Game Over	
High Scores	
12/6/97	603
9/16/98	524
11/5/97	518
10/29/99	517
10/21/97	509
9/18/98	509
8/3/98	506
6/1/98	501
11/1/97	499
1/25/98	495

Play Again (Y/N) ?

Screen 2: The first program I ran from PocketDOS (on my Jornada 680) was an old version of the popular dice game, Yahtzee.

.COM extension. Sometimes a program is launched by running a batch file, ending with a .BAT extension. After you launch PocketDOS and get to the DOS prompt, type in the name of the program you want to run and press Enter.

The first program I ran was an old DOS version of the popular dice game Yahtzee, developed for HP's 200LX. The program file (a.k.a. executable file) was YAHTZEE.EXE. I had copied this file to the PocketDOS directory on my H/PC, so I didn't have to use the cumbersome DOS Change Directory (CD) command. I typed in yahtzee at the DOS prompt (you don't have to type in the file extension) and hit Enter. Yahtzee popped up in a couple of seconds (see Screen 2).

Yahtzee and many other DOS programs use Function Keys to activate features. Desktop PC keyboards still have F1 through F10 keys on the top row of the keyboard. But H/PCs don't. Fortunately, PocketDOS simulates Function Keys. Hold down the Windows key (bottom row between Ctrl and Alt) and press the corresponding number key. For example, (WinKey)+(1) = F1, (WinKey)+(2) = F2, (WinKey)+(0) = F10. There is not F11 or F12. Again, a list of

these key combinations is displayed every time you start PocketDOS or every time you type KEYHELP from the DOS prompt.

Getting WordPerfect for DOS to run on the Jornada 680

Yahtzee and a number of other DOS games I tested ran fine in PocketDOS. I also had no problems running LapLink III, a DOS split-window file manager. But I did have some trouble getting WordPerfect 5.1 for DOS to work in PocketDOS. When I tried to start WordPerfect, I got an error message telling me that I didn't have enough "File Handles." The message (from the WordPerfect application) told me that I needed at least 25 File Handles. Fortunately, I'd worked with DOS before and knew what needed to be done. I quit PocketDOS, found the CONFIG.SYS file in the Program Files/PocketDOS folder, and opened it in Pocket Word. Then I modified it, adding the following two lines:

```
Files=30
Buffers=25
```

I saved it as a text file, making sure the file name was CONFIG.SYS (Pocket Word tried to change it to CONFIG.TXT). Then I

re-started PocketDOS and tried to start WordPerfect again.

This time I got to WordPerfect's opening screen, but when I tried to go beyond that screen, WordPerfect kept asking me to change the directory it was using. When I attempted to type in a new directory address, it never accepted it. I consulted the documentation I have for WordPerfect, but could not find a solution. So I e-mailed PocketDOS technical support (demo@pocketdos.com) and described the problem to them. They responded immediately and requested further information about WordPerfect. As I sent the Mar/Apr issue to the printer, they were trying to replicate the problem and come up with a solution.

Traveling back in time

When you open up PocketDOS, you're leaving the relatively comfortable world of Windows CE and traveling back in time to an era when computers were more textual and less visual. In most cases you have to type in commands to get PocketDOS to do things. If you've used DOS before, this won't bother you much.

You shouldn't have any problems with the smaller, simpler DOS programs, as long as they will work on an Intel 8086/80186-compatible processor and display as text or on a CGA monitor. The program should be compatible with DOS 6.22 or previous versions of DOS.

I don't blame PocketDOS for the difficulty involved with the WordPerfect installation. The problems were DOS configuration issues and the way WordPerfect accesses its working directory. You'll run into similar situations installing other DOS programs, especially programs that involve multiple files and sophisticated installation procedures. In some cases you'll need the program's original documentation, or even the help of someone familiar with the ins and outs of DOS.

I am particularly impressed with PocketDOS technical support. They support both registered users and users evaluating the product. They answered my questions promptly and even volunteered to figure out the problem I was having with WordPerfect. And while they haven't yet come up with the solution, they are still trying.

The demo version of PocketDOS will give you a good feel for the program. If you like it, you'll definitely want to pay the registration fee of \$40. The registered version gives you an unlock code which removes restrictions on the program, including the

PocketDOS technical description

PocketDOS provides MS-DOS 6.22 compatibility for your Windows CE H/PC or H/PC Pro pocket computer. Most applications designed for an Intel 8086 or 80186 compatible processor with a CGA or text display can be run on your Windows CE device using PocketDOS. In addition, most applications designed for the proprietary display modes of the Hewlett-Packard 95/100/200LX palmtop computers can also be run on your Windows CE device using PocketDOS. PocketDOS uses ROM-DOS (www.datalight.com) to provide a fully Year 2000 compliant MS-DOS 6.22 compatible disk operating system.

Before installing DOS applications to your Windows CE device, you should check that they do not exceed the following requirements:

- Intel 8088/8086/80188/80186 compatible processor (CPU)
- 700Kb of Conventional RAM
- 144Kb of UMB RAM
- LIM EMS 3.2 Expanded Memory (EMS)
- CGA compatible display adapter (includes support for HP INT5F graphics modes)
- 2x 16550 compatible UART communication ports
- Standard (INT 33) DOS Mouse driver
- MS-DOS 6.22

Note: If using applications designed for HP95/100/200LX computers, the PALRUN, INT5F or CG TSR programs should NOT be run, as this functionality is included in the PocketDOS application.

In addition, applications should be able to be installed on a network drive, as this is how PocketDOS "sees" the Windows CE file system.

annoying delay in the start-up screen. You also get a replacement for the PocketDOS system file (PocketDOS.SYS) which contains a full set of DOS utilities as well as XModem and ZModem file transfer utilities and a terminal emulation program. Finally, you get a printable PocketDOS user's manual in PDF format.

According to the PocketDOS Web site (www.pocketdos.com) there is a version of PocketDOS in development for the Palm-size PC. With DOS dependence on text entry of commands, it will be interesting to see just how functional a P/PC version will be.

PocketDOS opens up a world of new (actually old) possibilities for Handheld PC users. I'm conservative about using the term "must have." But I'm keeping PocketDOS on my H/PC Pro. To download PocketDOS, go to www.pocketdos.com. ■



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PocketTV

Taking multimedia a step further by adding an MPEG player to Windows CE PC Companions.

BY RICH HALL

A big part of the Windows CE future is multimedia. The ability to record voice memos, play electronic music files, record and play back video in color, and read e-books will make current and future PC Companions more fun and useful. And Windows CE's ability to support more robust multimedia applications will help Microsoft differentiate the Palm-size PCs (now being called "Pocket PCs") from devices running the simpler Palm OS that does not support multimedia as well.

We've already seen quite a bit of Windows CE multimedia development. Sharp was the first to come out with a Digital Camera Card over two years ago, for its Mobilon 4500/4600. They still sell it as an option for its Mobilon Pro H/PC Pro. Hewlett-Packard recently upgraded their Jornada Palm-size PC to include a stereo

headphone jack and a built-in MP3 player (the Hum). And Casio introduced perhaps the most successful Palm-size PC to date, Cassiopeia E-100/105. Its success was largely due to multimedia features, including a stereo headphone jack, built-in Mobile Audio and Video players, AudiblePlayer

new Palm-size devices based on this technology will now be called the "Pocket PC." Among other improvements, the new wave of Pocket PCs will include the Microsoft Reader with ClearType technology for reading e-books; and the Microsoft Windows Media Player for the Pocket PC, allowing users to

MPEG support for PC Companions gives you the ability to record voice memos, play electronic music files, record and play back video in color and read e-books.

(for listening to audio books), and an optional Digital Camera Card that captures still images and video with sound.

Finally, Microsoft recently announced the next iteration of the Windows CE operating system and Palm-size PC applications. The

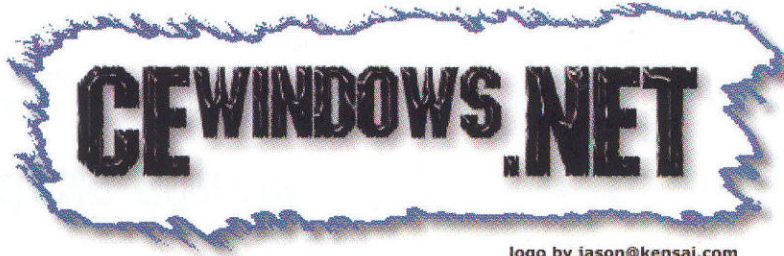
play music in either Windows Media or MP3 format. We expect that most of the new Pocket PC devices will have stereo headphone jacks to support these applications.

PocketTV: an MPEG movie player for Windows CE

MpegTV (www.mpegtv.com) recently released the beta version of PocketTV, a free MPEG movie player for Windows CE Handheld and Palm-size PCs. PocketTV plays standard MPEG1 files, which makes it a more universal solution than Casio's Mobile Video player.

I downloaded the free beta version at www.mpegtv.com/wince/pockettv/index.htm and installed it on my Casio E-100 Palm-size PC. This early version of PocketTV does not come with an installation routine. You have to copy the program (POCKETTV.EXE) from your desktop PC to your PC Companion using ActiveSync. Copy it to the WINDOWS\StartMenu\ folder and it will appear in your PC Companion's Start menu.

I also downloaded a short MPEG video clip of the movie *Top Gun* from the MpegTV site, and another clip of two railroad cars colliding from another general MPEG site. The MPEG files must be placed in the "My Documents" folder. If you use a CompactFlash card or other storage device



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(e.g. IBM microDrive), you must create a folder called My Documents on the storage device and place the MPEG files in this folder. I opened PocketTV, went to the Open option in the File menu, and selected the MPEGs. Each ran without any problems (see Screens 1 & 2).

PocketTV comes with the standard MPEG player controls, including the ability to pause a clip, rewind it, mute the sound, step through still images, set the clip to play in continuous loop, set the audio to play in stereo or mono, and adjust the audio quality (low, medium, high). If you have a Casio E-100/105 or an HP Jornada 430se with stereo headphones, you'll want to set the auto to stereo and the audio quality high.

The various Handheld and Palm-size PCs come with different CPUs. There are separate versions of PocketTV available for Palm-size PCs (MIPS or SH3 processors) and Handheld PC Pros (SH4 or ARM processor, Windows CE 2.11). I have an HP Jornada 680 Handheld PC Pro with an SH3 processor. I went ahead and installed the P/PC SH3 version of PocketTV on the Jornada 680 and it seemed to work without any problems. The Web site indicates that versions are in the works for older Windows CE 2.0 Handheld PCs.

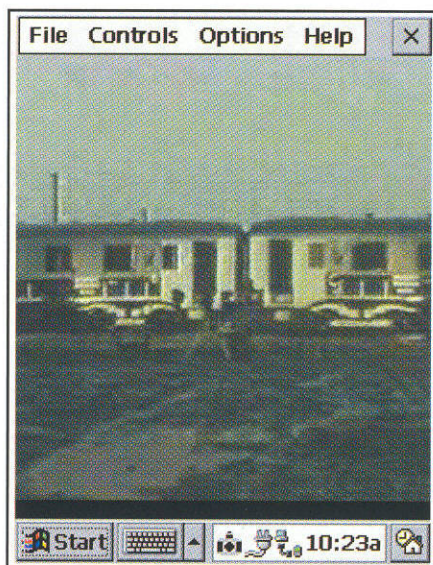
For best results

On Palm-size PCs, the best results are obtained when playing MPEG files encoded in QSIF size (160x120) or half-SIF size (240x160). PocketTV can play larger size video and is limited only by the performance of your system and the size of your screen. PocketTV's Web download site (www.mpeg-tv.com) has two MPEG movie trailers you can download, a 30-second clip from *Top Gun* and a two minute clip from *Starwars*.

Your PC Companion device needs to be able to display at least 256 colors, but a 65,536 color display is recommended. If you have a 256-color screen, you need palette support (PocketTV won't work on devices that support only the system palette). Stereo support is recommended (e.g. Cassiopeia E-100 series or the HP Jornada 430se). You need about 500K of storage memory for the PocketTV program, plus memory to store the MPEG files. You'll also need about 1 to 2 MB of available RAM to run the program.

Why is MPEG support important?

I mentioned the Casio E-100/105 earlier. The main criticism I have for Casio's Digital Camera Card and Mobile Video recorder/player is that they use Casio's proprietary CMF format for the videos they cre-




Screens 1 & 2 show MPEG videos displayed using PocketTV on the Casio E-100 Palm-size PC. The first screen is of two railroad cards colliding, the second is from the popular movie, *Top Gun*.

ate. They include a utility that translates MPEG video clips to the CMF format, but not the other way around.

MPEG is the most common video format. You can send just about anybody an MPEG clip and they'll be able to open it up and play it on their desktop computer. MPEG clips can be used for more than entertainment purposes. You can record visual instructions on how to accomplish a task, educational videos and more. There are those who predict

that short video messages (personal and business) will replace, or at least compete with e-mail text messages in the future.

All things considered, MPEG support for PC Companions makes a lot of sense, for business and entertainment. I expect we'll see other MPEG players for Windows CE. But for now, PocketTV is an excellent first shot and the only MPEG player available. ■



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Business On The Go!

Busy attorney Michael J Posner reveals a hardware and software arsenal that allows him to do business anywhere, anytime.

BY MICHAEL J POSNER

Unlike engineers and physicians, who are surrounded by and depend on technology, executives and business professionals tend to shun technology and prefer time-honored methods for their work. Computers, CD-ROMs and the Internet were adopted slowly, and handheld usage has, until recently, suffered the same fate amongst lawyers. However, with the growing power of the various Windows CE devices (and a bow of acknowledgement to the Palm Pilot), business professionals are beginning to adopt both handhelds and Palm-size PCs for their business arsenals.

This adoption rate will remain low unless more powerful and useful tools are developed that can benefit their bottom line. For example, a promising time and billing program (a key need of time-based professionals such as lawyers and architects) I reviewed several months ago has been halted in development and little comparable software exists. Sometimes it is necessary to take matters into one's own hands. Utilizing a program like Visual CE, a database tool for non-programmers, a basic time and billing database can be created to partially solve this problem.

Another example is the lack of support for interfacing desktop programs and Windows CE devices.

A portable reference library

One advantage of both the handheld and Palm-size Windows CE devices is the large size of text files that can be carried, opened and edited by Pocket Word, or Notetaker. As a lawyer, I can carry relevant chapters of Florida law on my Cassiopeia E-105 as a reference tool and add notes to them as I work (even in court!).

For larger works (in excess of 500K) I use the program Mobibook (www.mobibook.com), which is one of the many e-book readers for Windows CE devices. Many

company manuals and data are available in text format that can be easily transferred to your Windows CE device and previewed on screen. Mobibook offers in-text bookmarking and a fast scrolling (see Screen 1).

You can also create a mobile channel of your favorite Web site using the Mobile Channel Wizard available from Microsoft at www.microsoft.com/windowsce/products/download/list.asp. After downloading the wizard and installing the program, simply point your browser to a Web site and run the wizard to create the mobile channel. Then re-sync your device and the channel will be available for offline browsing.

Adding a larger keyboard

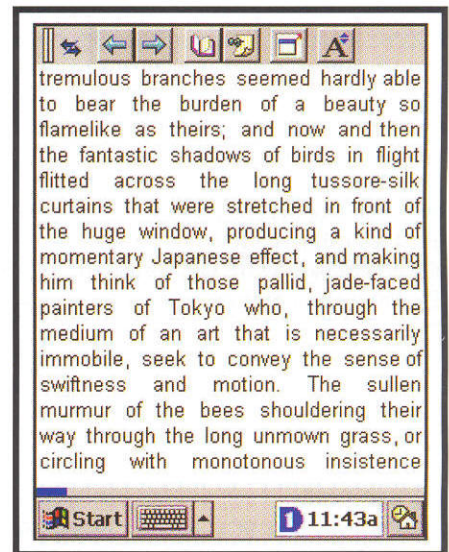
Getting large quantities of data into a P/PC or H/PC can be problematic, but there are several solutions available. Hewlett-Packard now offers an external keyboard (see Screen 2) that works with both the HP 300 and 600 series Handheld PCs as well as the Jornada 420/430 Palm-size PCs.

The HP External Keyboard (F1275A) is small in size, with six rows of 12 or 13 keys. The top row is slightly smaller, and contains the Esc and function keys. The remaining rows have the standard QWERTY keys. There is no Caps Lock key (the function is activated by pressing Fn/Shift). The HP External Keyboard has a large Enter key and right Shift key. The arrow keys are in the lower right, smaller but in the proper north south, east west configuration.

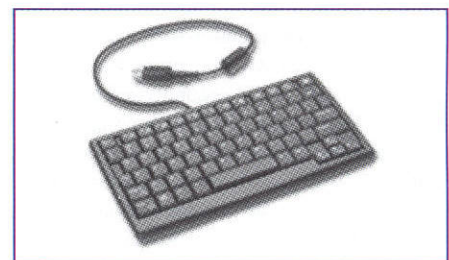
I have used the keyboard at the pool with my HP 360 Handheld PC and I can usually hit 30 to 40 words per minute with good accuracy. With the HP 420/430 Palm-size PCs, you must use the docking cradle to connect to the external keyboard. This provides a good screen viewing angle for editing purposes. The Casio E-100/105 Palm-size PCs also have a similar external keyboard.

Enhancing productivity

If a keyboard will limit your mobility,



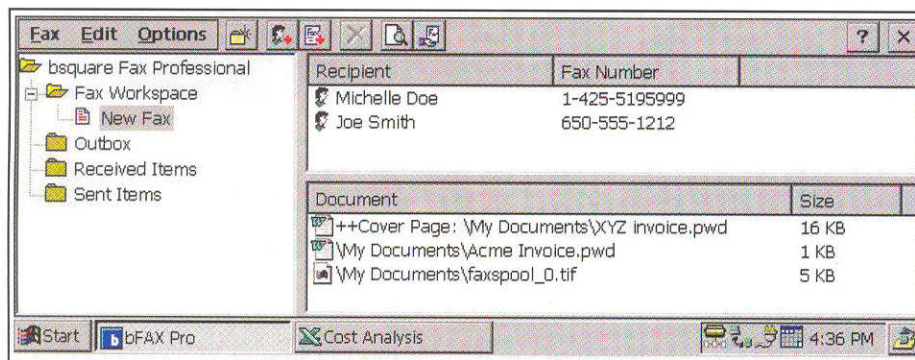
Screen 1: For viewing larger works (in excess of 500K) I use the program Mobibook, an e-book reader that offers in-text bookmarking and fast scrolling.



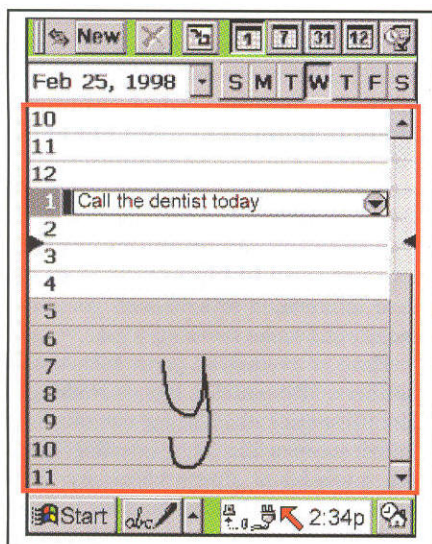
Screen 2: The HP External Keyboard connects to any of HP's 300 or 600 series Handheld PCs as well as the Jornada 420/430se Palm-size PCs, letting you enter data easily from a 90% fullsize keyboard.



Michael J Posner is a Board Certified Real Estate partner with the law firm of Cooney, Ward, Leshner & Damon, P.A. in sunny West Palm Beach, Florida. Specializing in Real Property, Corporate and Intellectual Law, Michael spends his spare time writing, playing with computers and working on his novels. He is most proud of his four year old son Christopher and his wife, Florida Assistant Attorney General Sylvie Perez Posner.



Screen 4: bFax Pro adds fax send/receive capability to H/PCs and P/PCs, a number of which come with this program built into ROM.



Screen 3: Jot is built into all Palm-size PCs and adds single-character handwriting recognition. The Jot Pro upgrade lets you write your characters anywhere on the screen instead of in a small box at the bottom of the screen.

there are other input options that enhance productivity. For Palm-size PC users, Jot Pro (www.cic.com/products/index.html) is a worthwhile upgrade that allows a user to input data anywhere on the screen (see Screen 3) instead of in boxes like the original Jot.

Jot Pro also allows the creation of sophisticated macros. For example, you could easily use "mjp" in place of "Michael J Posner." The Macro Editor is simple to use and provides for a one-time definition of phrases of up to 1,024 characters in length. "One-time" means that you can't edit it after it's created, but you can replace it. To use a macro, you simply enter the extended character gesture before writing out the macro. It works well and is reasonably fast in replacing your macro word.

Wireless communications and e-mail are the future of ultra-portable devices. At present, however, high cost, slow speed and limited availability make these a poor choice for

many users. A practical alternative is bFax Pro (see Screen 4) from bSQUARE, (www.bsquare.com) which lets you send and receive faxes using an inexpensive PC Card modem. If you don't need high-speed modem access (and you don't for faxes and e-mail), you can easily pick up a used 14.4 or 33.6 Kbps fax/modem card for less than \$50. bFax Pro is very flexible, allows batch sending and creates cover pages. Team bFax Pro with one of the many Internet fax services and you can send a fax to anyone with access to your Internet fax page. (bSQUARE will soon release bFax Pro 5.0, which will include Internet faxing, the ability to hand write on documents, and more.) ■

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Road Warrior's Checklist

8 things to remember when you hit the road with your PC Companion.

BY RANDOLPH SLY

It's been a while since I've traveled with a laptop computer. I abandoned it a few years ago for the HP 100LX Palmtop PC, which provided the on-the-road computer capabilities I needed in a form factor that slipped easily into my pocket. The laptop has stayed on my desk for several years now, and my palmtop journey has continued through various generations of Windows CE units. Both the Handheld and Palm-size PC have become my constant traveling companions.

However, the convenience and relative stability of these devices can lull you into a false sense of security. A few years ago I was sitting in a restaurant 300 miles from home. My appointment was late and I needed to make some important notes on my Palm-size PC before we met. I slipped my unit out of the carrying case and — no stylus! Another time I took my seat for a critical meeting and turned on my Handheld PC to access important notes. Quickly I realized I had “charged” the H/PC the night before from an electrical outlet that was controlled by a switch on the wall. When I turned the light off to go to sleep, I turned off the power adapter. Other unexpected things can happen: broken displays, missing files; the list goes on and on.

Over the years these incidents have contributed to the formation of a “Things I Won't Leave Home Without” checklist list, so that I'm prepared for the worst.

Things I Won't Leave Home Without

PC or CompactFlash storage cards with a backup of my Pocket Outlook (PIM) data — No matter how much Windows CE improves, flawless operation can never be guaranteed. Several years ago something corrupted my whole Contacts data file. Fortunately, I had all PIM data backed up on a PC storage card and quickly restored all the data.

Extra battery(ies) and backup battery — I always carry an extra rechargeable battery (fully charged). This has been a life-

saver in long meetings. Whenever I recharge my battery, I always swap it with my extra battery. This way both batteries are alternatively kept active and freshly charged. My P/PC runs on AAA batteries, so a package of Alkaline's is always in my briefcase.

AC power adapter — In addition to recharging (most H/PCs and many P/PCs now use rechargeable batteries), AC power is essential for telecommunications, which can drain batteries quickly. I leave my CE travel kit packed at all times. It includes a second AC power adapter I bought especially for travel. Call me lazy for not wanting to crawl under my desk, but I always know I have the adapter with me.

Extra stylus — I carry at least two extra styluses in different locations. One usually travels in my Palm-size PC case and the other in my briefcase. While I lean toward slim cases for my Palm-size PCs, many cases have a place for a stylus. I encourage people to leave the unit's stylus in its usual place and put another one in the case. You can even get attractive pen/stylus combination devices that you can keep clipped to your shirt pocket.

Modem card and cable, Phone line extension cord (8' minimum), Line cord coupler — Every hotel setup is different. I carry an eight-foot phone cord and a line coupler. You can now buy extension cords in a retractable style for convenience. I purchased mine through a mobile specialties store, but now most of the major office equipment chains carry these. When traveling overseas, you will also need to check on phone adapters for the special country in which you are staying.

Information I won't leave home without

Know how to do hard and soft resets, and when to do them — A soft reset is like turning your desktop PC off and on again. You loose any unsaved documents that happen to be open at the time, but nothing else. If your PC Companion locks up and you can't get it to do anything, a soft reset is a relatively safe procedure. A hard reset usually involves removing main and backup batteries. It erases data files and any third-

party software programs you've installed on your PC Companion. You would only consider it if a soft reset doesn't work, and then only if you had a complete backup of your PC Companion. Some PC Companions come with a built-in rechargeable backup battery that cannot be removed. In this case, the manufacturer's user manual will tell you how to disable the backup battery for a hard reset. Know how to do these before hand, or be prepared to spend a long time waiting on an 800-number technical support line. Your PC Companion manufacturer's technical support phone number would also be a good bit of information to have with you, on a card in your wallet for safety's sake.

Have a record of your ISP Access Numbers, DNS entries, etc. — Nothing is more frustrating than being cut off from Internet access while you're traveling. It had been my habit to always check my ISP's homepage for local access numbers before I travel. In more recent years I have just downloaded the page of numbers as a text file on my PC Companion. I also have the 800 access pre-programmed as a dial-in configuration, just in case.

Corrupted dialup configurations can occur, as well as lost User ID's and passwords. Be sure to have a record of all this data in a location other than the Remote Networking configuration itself. You can have an entry for your ISP in your Contacts list, with the configuration information in that entry's Notes page. Or you can keep it in a third-party program like eWallet.

Some ISP's require IP (Internet Protocol) and DNS (Domain Name Server) addresses in order to access the Internet. If you haven't already configured your PC Companion, all of this information is contained in the Dialup Networking on your desktop PC. The same is true for incoming and outgoing mail, your POP3 and SMTP Settings.

.....
The Most Rev. Randolph Sly is an Archbishop in the International Communion of the Charismatic Episcopal Church. He is a graduate of Spring Arbor College (B.A.), Asbury Theological Seminary (M.Div. with honors), and pursued doctoral work in “Media and Technology.” He has been involved in the field of communications and media since 1971.

CHECKLIST: Don't Leave Home Without it!

- Storage RAM with backed up PIM information
- Date of last backup _____
- Serial cable and ActiveSync software on disk
- Modem Card (if you don't have a built-in modem)
- Phone extension cable (8 foot minimum)
- Phone line cord coupler
- Extra fully-charged battery(ies), extra backups
- AC power adaptor
- Outlet adaptor (if traveling overseas)
- Phone outlet adaptor (if traveling overseas)
- Extra stylus (at least one)
- ISP phone number(s) where I am going _____
- My User ID is _____
- My password is _____
- My e-mail User ID is _____
- My e-mail password is _____
- My DNS setup is
() automatic
() manual _____
- My mail-server setup is as follows:
POP3 _____
SMTP _____
- I know how to do a hard and soft reset of my unit
- My unit is packed properly and safely

Be careful how you pack your PC Companion

PC Companions are safest when traveling in their own protective case. Even after waist-high drops, my units have continued to function. Also, be careful how you pack your PC Companion. While returning to the

United States from England, I opened my H/PC to do some work in an airline lounge only to find the screen a scrambled mess! I had not dropped the H/PC or subjected it to any unusual jolts or jars. The only thing different I had done on that trip was to carry it

in a backpack instead of a briefcase. I discovered that I had packed my H/PC in such a way that I was bending the unit whenever I put the pack on my shoulder.

The moral: PC Companions don't bend well! ■

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The PC Companion Products listed here include hardware, software, publications, events, and developer services for Windows CE. Information about the H/PCs and Palm-size PCs themselves can be found in our "At A Glance" section. Prices listed are suggested retail price. Many software products are available for online downloading. Listings do not represent an endorsement by the editors. CE Station (www.cestation.com) is an excellent place to find commercial software, demos, and shareware/freeware. If you can't find the software you're looking for there, check out <http://pda.tucows.com/wince/>. However, there will be gaps due to information not arriving by our printing deadline. If you have a product to announce in our next issue, please send an e-mail message to editor@thaddeus.com. For live links to the Web sites mentioned in this section, visit our Web site at www.hpcmag.com.

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Accessories

C.E.O. Leather Cases

Trifold cases which can be flipped for left-handed or right-handed use. The cases feature two paper pads, credit card, cash and ID pockets, a pen holder and Velcro attachment for the handheld device. The C.E.O. fits the majority of the palm-size PCs that are currently available. A list can be found at MarWare's website.

\$29.95; Use With: P/PC; MarWare; www.marware.com; E-mail: sales@marware.com; Phone: 510-337-0231

HP CapShare 920

A portable handheld "e-copier" used to scan and capture text and images from printed material and then share it with associates and friends. Flip Chart mode lets you copy full-sized flip chart pages. Includes cropping and auto-straightening functions and comes bundled with OCR software (for your desktop PC) so users can manipulate the text of copied documents. The HP CapShare 920 can copy graphics in a 'grayscale' type mode. CapShare 920 can connect via IR to all Windows CE and Psion devices.

\$499.00; Use With: H/PC; P/PC; H/PC Pro; Hewlett-Packard Company; www.capshare.hp.com

RESCO Keyboard

Resco keyboard gives you ability to write texts and control your applications. In addition to the default keyboard there is numeric keyboard for typing numbers or numerical expressions, and special keyboard for fast inserting of often used phrases. Resco keyboard has a built-in auto-repeat function.

\$9.98; Use With: P/PC; Remote Solutions; www.resco.sk/resco/; E-mail: resco@resco.sk; Phone: +421-7-44889447

The PowerCon series

The PowerCon series of power adapters converts a 12V input to 5V, 16V, or 22V output, depending on the model. The PowerCon adapters free the H/PC users from juggling battery packs and running out of power. The PowerCon adapters use an efficient switch-mode power supply design. Several models are available with interchangeable tips for most H/PC models.

\$n.a.; Use With: H/PC; P/PC; H/PC Pro; Aegis Technologies; www.primenet.com/aegistec; E-mail: aegistec@primenet.com; Phone: 520-773-0189

PC/CF Memory Cards

DK3CF+ CompactFlash Card

CF Card that protects your Windows CE 2.x applications and data against unlicensed use. In addition to this the DESkey API

provides the means for your application to encrypt and decrypt data through the DESkey CF Card.

\$n.a.; Use With: H/PC; P/PC; H/PC Pro; Data Encryption Systems; www.des.co.uk/; E-mail: sales@des.co.uk; Phone: +44 (0)1823 352357

Services

Internet

Intellisync.com Worldwide Synchronization Service

A free Internet-based synchronization service scheduled to debut in the first quarter of 2000. Intellisync.com will allow anyone with Internet access to keep popular PC applications, mobile devices and Web-based content and services effortlessly synchronized from one central address on the web.

\$n.a.; Puma Technology; www.pumatech.com; Phone: 800-774-7862

Online

www.1800mobiles.com

Search for and purchase mobile phones, two-way radios and available accessories for Nokia, Ericsson, Motorola, and other mobile phones. This site specializes in hard to find items for the road warriors, such as portable video conferencing, mobile internet phones and more. They also have a section where you can purchase PDAs and PC Companions.

\$n.a.; 1-800-MOBILES; www.3com.com; E-mail: salesinfo@mhz.com; Phone: 800-527-8677

Publications

Teach Yourself Windows CE Programming in 24 Hours

A step-by-step tutorial that teaches readers how to create Windows CE software applications. The material is presented in a focused, easy-to-follow manner. Topics covered include standard controls for CE devices, HTML Viewer control, working with icons, fonts, and graphics, persistent storage, threading, serial communications, WinSock, and WinInet, printing, CE Mail, power and system resource management, and debugging.

\$24.99; BSQUARE Corporation; www.bsquare.com; E-mail: sales@bsquare.com; Phone: 888-820-4500

Training

CE Go! Program

Official Windows CE Training Course For Developers of Intelligent Computing Devices is a training course that will allow developers to begin Windows CE-based device development immediately. Development of Windows CE-based intelligent computing devices such as set-top boxes, web pads, handheld computers, and others. For a limited time, BSQUARE's new CE Go! program will offer a free package of products and training worth \$3,495 to customers who purchase Microsoft's Platform Builder version 2.12 Standard Edition. Platform Builder Standard Edition includes 250 runtime licenses for Windows CE and is priced at \$11,800.

\$11,800; BSQUARE Corporation; www.bsquare.com; E-mail: sales@bsquare.com; Phone: 888-820-4500

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Software

Communications

JetSend for Windows CE

Provides a simple, fast and convenient way for users of Windows CE devices to exchange or print information "on the go," regardless of device manufacturer. HP's future plans call for JetSend to be integrated into many other mobile devices, including those that will feature Palm Computing's Palm OS, as well as cell phones, pagers and laptop PCs.

\$19.95; Use With: H/PC; P/PC; H/PC Pro; JetSend;
www.jetsend.com

MobileCE

A communications software package designed for use on any Windows CE-powered system, with sufficient error correction capabilities for wireless and satellite transmission. INTACTA's compression process saves bandwidth and transmission time, reducing communication costs and enhancing the value of your mobile system. Files, faxes and e-mail can be received, viewed, and printed on your PC Companion. A complementary product conversely allows desktop systems to open and read files sent from your PC Companion.

\$n.a.; Use With: H/PC; P/PC; H/PC Pro; INTACTA Technologies;
www.intacta.com; E-mail: info@intacta.com;
Phone: 404-880-9919

SendMyStuff

Simplifies the process of creating and sending an SMS-message from a PC Companion through a mobile phone. With SendMyStuff the only thing you have to do is open a serial connection to your phone and send the SMS to it - and off goes your stuff! Especially for the Ericsson SH888 cellular phone. Note: Requires mfcc20.dll if not already installed on your device.

\$n.a.; Use With: H/PC (MIPS only); P/PC (MIPS only); Download or demo available; CE Station; www.cestation.com/

Sync Talk

Enables wireless "Hand 2 Hand" information exchange. Specifically for Windows CE, Palm, and EPOC32. For example SyncTalk will enable a Windows CE user to wirelessly send an appointment from their device to a Palm device. Or a Windows CE user to send a business card wirelessly from their device to a Palm device or an EPOC32 device. Exchange of appointment and contact information is supported between Palm, Windows CE, and EPOC32 at the touch of a button.

\$n.a.; Use With: H/PC; P/PC; H/PC Pro; Download or demo available; SoDeog Technologies; www.sodeog.com; E-mail: info@sodeog.com; Phone: 704-602-3007

Connectivity

CESpeedUp

Automatically set the connection speed on your PC Companion to same speed as your desktop PC. CESpeedUp analyzes and displays the baud rate on your desktop PC.

\$n.a.; Use With: H/PC; P/PC; H/PC Pro; Download or demo available; CE Station; www.cestation.com/

Database

JetForm Pocket Form 4.0 (Japanese language version)

Japanese language version of a program that lets you download data collection forms to your Windows CE Handheld or Palm-size PC, collect data on the go, and then transfer their data via e-mail, infrared, modem, or serial cable to a host computer for further processing.

\$79.00; Use With: H/PC; P/PC; H/PC Pro; Download or demo

available; Joey Technologies; www.joeytech.com; E-mail: sales@joeytech.com; Phone: 813-822-JOEY (5639)

Developer

JumpStart for HP

Proxim, HP and Odyssey Software now have a single-solution developers toolkit that offers companies low-cost, real-time mobile access to enterprise information. The toolkit includes: HP's Jornada 680; Proxim's RangelAN2 wireless LAN connection; Odyssey Software's Cefusion the enterprise connectivity software; and the Microsoft Windows CE Toolkit for the Visual Basic development system version 6.0. Also included in the toolkit is a sample application and tutorial to assist in developing a working application.

\$1,899; Connectronics; www.connectronics.com;
Phone: 319-366-4971

Finance

FINANCE CE 3.0

Lets you record your monetary transactions quickly and accurately. To protect your data you can use your personal password security. FINANCE CE 3.0 supports split and transfer records as well as multiple accounts and different currencies to calculate your travel expenses. Use the integrated budgeting functions to set limits for each account or expense/deposit category. FINANCE CE 3.0 reminds you on program start or on demand for all planned transactions and exceeded limits. Records may be selected by category, account, and/or creation date. Create your personal reports to view in Pocket Word. Other features allow you to backup/restore records in connection with your desktop PC. You may also create reports on your desktop PC and upload or download data to/from Quicken or Microsoft Money.

\$39.90; Use With: H/PC; P/PC; H/PC Pro; Download or demo available; VCA Systems; www.aaa-software.com; E-mail: info@vca.de

Time-To-Time

Helps you record and report billable time for multiple customers and accounts. Time-To-Time is for professionals who bill

clients for their time, or track time for other reasons. The invoice/reporting program runs on desktop PC running windows 95/98/NT/2000. Allows you to select (or enter new) companies and projects. Notes may be made for each day's recorded time. Multiple projects can be recorded for each day. Start time and duration is stored for each time period worked. Time worked can be recorded using a timer with a start/stop button. Times may be added or modified easily. Total time worked for the selected day, company, project is always visible.

\$n.a.; Use With: H/PC; Tom Thumb Software; Phone: 540-786-9196

Games & Entertainment

CE Taipei

Classic Taipei tile game, also known as Shanghai or Mahjongg solitaire. Due the screen size, the game has a limited tile set of 130 tiles in total. Download a trial version of CEtaipei which is limited to 150 points. After reaching 150 points, the game is stopped and you will have to restart it. (MFC.dll Required). This Web site also has an online Java-based Taipei game you can play with a Web Browser.

\$10.00; Use With: H/PC; Download or demo available; Java Taipei Homepage; www.kyrandia.myokay.net/; E-mail: javataipei@myokay.net

Hackin/Phreakin CE Background Pack

Hackin/phreakin backgrounds for the Palm-size PC. Original art, very colorful.

\$n.a.; Use With: P/PC; Tucows Windows CE;
www.pda.tucows.com/wince/index.html

JIS Nemo

A puzzle game where you have to mark out cell to win.

\$n.a.; Use With: H/PC; Download or demo available;
PDA21.COM — Jisan Information System Co., Ltd.;
www.pda21.com/; Phone: +82-2-785-5085

Kings Corners

It's just like the regular Kings Corners solitaire, except that as you solve the solitaire, you're building a picture. You can choose a picture of your own, including some you can download from the developer.



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- Internet and Infrared
- Custom Protocols

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- Sales Force Automation
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PC Companion Products

\$15.00; Use With: H/PC; P/PC; H/PC Pro; Download or demo available; Thieves and Kings; www.thievesandkings.com; E-mail: things@thievesandkings.com; Phone: 800-704-7277

KSE Snake

Maneuver a snake through various levels. To complete a level successfully the snake has to reach a defined length by eating some food. Also the snake will become shorter if it doesn't get enough food for a certain amount of time.

\$19.90; KSE Software; www.kse.de/; E-mail: sales@kse.de; Phone: +49 211 209 966

Moline

An action game where a mole attempts to defeat its enemy on land, sea, and in space. You can get more points through bonus stage in which appear between every stage. You can get one bonus life if you reach the special points or clean up bonus stage.

\$24.95; Use With: P/PC; Download or demo available; CE Station; www.cestation.com/

Y2K Bugs

You have 50 Seconds to kill Y2K bugs, each Y2K Bugs score you 10 points and add 0.5 seconds, if you kill other bugs you will lose 3 seconds.

Freeware; Use with: H/PC, H/PC Pro (including StrongARM), P/PC; Download or demo available; Micro Cheng; http://l.am/micro_cheng

Graphics & Imaging

Images Control CE

An image viewer, allowing you to display bmp, 2bp, jpg, and xbm formats on a color-screen Palm-size PC. Using Images Control CE, you can browse through pictures in an image list forward or backward using the action switch on the left side of the P/PC. You can also put all the pictures you want in an image list and start an automatic slide show with adjustable timer interval, making it a perfect tool for marketing slide show presentations. (The "Pro" Edition of Images Control CE includes IMCEUtils, a desktop utility that allows you to convert about 40 different image file formats.

\$24 (Pro Edition: \$49); Use With: P/PC; Download or demo available; CE Station; www.cestation.com/

Pocket Artist

An easy-to-use artistic tool for Windows CE devices. Pocket Artist lets you edit and retouch photos and images, add text and special effects, create web graphics, and much more. Features include: 24-bit color editing; open JPG/GIF/BMP; color adjustment; painting tools; filters; quick shapes; floating selections; image clipboard; blending modes; tool opacity.

\$49.95; Use With: H/PC, P/PC; Download or demo available; Conduits Technologies Inc.; www.conduits.com/ce; E-mail: info@conduits.com; Phone: 850-523-0426

Healthcare

Patient Tracker

An easy to use solution for day-to-day tracking of patients. Using a chart-like tabbed interface, Patient Tracker 3.0 allows entry of: Patient lists for both inpatient and clinic patients; Patient information including demographics, problem lists, doctor, admitting diagnosis and date; Medication lists including drug, dose, route, and scheduling; Laboratory results in a familiar to use visual format; Vital signs including Tmax and I/O's; Test Results. SOAP notes- automatically choose to include portions of previous days notes, automatically imports lab results and vital signs entries; Printing via infrared or serial port of SOAP notes; Printing via infrared or serial port of patient log.

\$40.00; Use With: P/PC; Download or demo available; handheldmed.com; www.handheldmed.com; E-mail: kjbooth@handheldmed.com

InfoManagers

CE Task

CeTask is a tray application that allows you to switch to any, close current, close all but current, close all applications, open Task Manager with only few taps on the screen. CeTask requires approximately 16K free storage on your Palm-size PC.

\$n.a.; Use With: P/PC; Tucows Windows CE; www.pda.tucows.com/wince/index.html

MediaWallet

Protects and organizes all your personal information. Find important information fast: notes, images, life-like cards, applications, audio, text and HTML. MediaWallet's simple interface means your data is only a couple of taps away, and you can keep sensitive information safe with strong encryption. Exclusive bonus features include photo albums, "talking pictures", phone dialer, application.

\$39.95; Use With: P/PC; Download or demo available; Applian Technologies; www.applian.com; E-mail: info@applian.com; Phone: 415- 831-1499

Pocket Notes 2000

The IS Pocket Notes application is a multipurpose note taker. Not only can it remind you of upcoming events, and due dates, it can take notes, plans your day, manages your contacts, and creates predefined template files. It includes 11 quick access buttons, password protection feature, multiple window interface, multitasking feature, and comprehensive save options, you have one all purpose power house program, suitable for students, executives, or anyone with an H/PC. (2MB memory required to run program).

\$n.a.; Use With: H/PC; Imperious Software; E-mail: lazan@mail.com; www.crosswinds.net/~impsoft/About.htm

StarCar

Collects and displays information on the user's automobile. From gas and oil to payments and taxes, it can all be entered, graphed, categorized, and listed. Import and Export to spreadsheets, too. When you purchase StarCar you get a bonus program called ZipHelp. It replaces the existing CE Help system, allowing the user's Help Files to reside in a single Zip file, on the Storage Card.

\$15.00; Use With: H/PC; P/PC; H/PC Pro; Download or demo available; Thumbs Up! Software; www.thumbsupsoft.com; E-mail: info@thumbsupsoft.com

Technician Assistant

Technician Assistant Version 2.0 is a call tracking Windows CE Palm-size PC application that runs on any Palm-size PC. It allows technicians to collect, store, print any information while on call. New Billing section included. Also has built-in time stamp in demo.

\$39.95; Use With: P/PC; Download or demo available; InterPlant Systems; www.interplant.vdnetwork.com/; E-mail: admin@interplant.com

Travel Manager

Helps you manage your travels and capture travel-related information. Capture costs and location descriptions; archive pictures for each journey or event and assign sound comments to each record and to each picture. Picture browser lets you create your own slide shows. Query functions let you check out information. Create personal reports. Backup and restore data to a desktop PC.

\$29.95; Use With: H/PC; Download or demo available; VCA Systems; www.aaa-software.com; E-mail: info@vca.de

Reference

ITIL Bible Reader —

General Letters from Apostles

This is a reader application that shows the modern English translation of the Holy Bible, based on the American Standard Version of the Holy Bible, the Biblia Hebraica Stuttgartensia Old Testament first published in 1901 and the Greek Majority Text New Testament. Books included with this download include: General Letters from Apostles and Prophets, Hebrews, James, 1 Peter, 2 Peter, 1 John, 2 John, 3 John, Jude.

\$n.a.; ITIL; www.itil.com; E-mail: palmix@itil.com; Phone: +91 11 695 900 Ext. 344

ITIL Bible Reader —

Letters from Apostle Paul

This is a reader application that shows the modern English translation of the Holy Bible, based on the American Standard Version of the Holy Bible, the Biblia Hebraica Stuttgartensia Old Testament first published in 1901 and the Greek Majority Text New Testament. Books included with this download include Letters from the Apostle Paul: Romans, 1 Corinthians, 2 Corinthians, Galatians, Ephesians, Philippians, Colossians, 1 Thessalonians, 2 Thessalonians, 1 Timothy, 2 Timothy, Titus, Philemon.

\$n.a.; ITIL; www.itil.com; E-mail: palmix@itil.com; Phone: +91 11 695 900 Ext. 344

Periodic Table

Reference for the periodic table of elements.

\$n.a.; Use With: H/PC, P/PC; Zabaware Inc; www.zabaware.com; E-mail: webmaster@zabaware.com

Tucows e-Texts for Windows CE

The Tucows Windows CE Web site has added an e-Text section with novels, poems and music lyrics in Pocket Word format for H/PCs and Inkwriter format for Palm-size PCs. The documents were originally converted to EPOC format by the Books&Psion site (http://members.xoom.com/books_pasion/) and into CE formats by TUCOWS. Simply unzip the downloaded file and copy the document to your PC.

\$n.a.; Use With: H/PC, P/PC, H/PC Pro; Download/demo available; Tucows Windows CE; www.pda.tucows.com/wince/index.html

Sports

Golfwits

Allows you to record your play (and up to three other golfers) on a detailed map of each hole of your course while Golfwits automatically posts your score and tracks your statistics. Designed for on-course use with a Palm-size PC, Golfwits is your digital "yardage book." Each round's details are saved for future review and game improvement.

\$49.95; Use With: P/PC; Download or demo available; SiscoSoft Corp; www.golfwits.com/; E-mail: info@siscosoft.com; Phone: 360-318-1526

HandicalCE

A Golf handicap calculator for Windows CE Palm-size PCs. Enter your golf scores, course slope and rating, and calculate your handicap.

\$n.a.; Use With: P/PC; Download or demo available; Softthat Software; www.softthat.com/; E-mail: support@softthat.com

NBAInPocket

NBAInPocket is a software developed for Basketball lovers having access to Handhelds running Windows CE 2.0 or later. It enables them to record and maintain statistics of Basketball games, teams and players. It is indispensable for Basketball coaches as it helps them maintain detail information about their teams and players. The coach can maintain detailed statistics of

his team and its players, can rank the players and add practice sessions of the team. He can also maintain and view notes about teams and players.

\$10.00; Use With: P/PC; Download or demo available; ITIL; E-mail: palmix@itil.com; www.itil.com; Phone: +91 11 695 900 Ext.344

ScoreWise

An easy-to-use golf score card and statistical analysis package that lets you keep track of all your courses, players, and rounds; keep notes about each hole; and provides statistical reports showing the strengths and weaknesses of your game. ScoreWise can automatically track multiple side games, comes with seven popular games built in, and lets you create your own custom games. (Requires ODBC 3.0+ drivers, which ship with the program).

\$34.95; Use With: P/PC; Download or demo available; Prevalent Technologies Inc; www.prevtch.com; E-mail: info@prevtch.com; Phone: 316-371-8816

Text

Pocket Notepad

A PC Companion application similar to the Windows Notepad, suitable for viewing text files, for taking short memo, for a buffer in cutting and pasting.

\$n.a.; Use With: H/PC; P/PC; Download or demo available; Tillanosoft's Windows CE Station; www.geocities.co.jp/SiliconValley-PaloAlto/5006/; E-mail: tillanosoft@geocities.com

Utilities

ArtSSave

A backup and restore utility that saves a "differential backup" (changes only) to a PC or CF storage card. Includes an automatic backup feature and selective restoring of data in advance mode.

\$25.00; Use With: H/PC; P/PC; ArtSoft; www.artsoft.ru; E-mail: info@artsoft.ru

CeProbe

Scans your CE devices and reports on the display, audio, registry, and file systems.

\$n.a.; Use With: P/PC; Download or demo available; PpcTools; www.pptools.com; E-mail: info@pptools.com

Palm Greetings

Greet your "near & dear one's" on your WinCE device with these graphical animations!

\$n.a.; ITIL; www.itil.com; E-mail: palmix@itil.com; Phone: +91 11 695 900 Ext.344

Power Explorer PPC

A file Explorer for the Palm-size PC that supports image viewing and file/folder Transfer via IrDA port. You can use Power Explorer to execute applications, move/delete/copy/view folder/file or its properties, create shortcut, views system's properties. Image file formats supported in Power Explorer are 2BP, XBM, BMP, GIF and JPG. This is a pre-release beta. The official version will be announced.

\$n.a.; Use With: P/PC; Download or demo available; PDA21.COM — Jisan Information System Co., Ltd.; www.pda21.com; Phone: +82-2-785-5085

QuickTask

A Windows CE task management program. Using QuickTask, you can easily switch to any open application. You can also close the active application or all applications. QuickTask's System Information window displays available memory, main storage, storage card memory and battery life. QuickTask runs in the Windows CE system tray for easy access.

\$20; Use With: P/PC; Download or demo available; AppStudio; www.appstudio.com; E-mail: sales@appstudio.com

SpaceLeft

Simple application that displays amount of free space in your internal RAM memory as well as any storage cards you have inserted into your device.

\$n.a.; Use With: H/PC; Download or demo available; Tillanosoft's Windows CE Station; www.geocities.co.jp/SiliconValley-PaloAlto/5006/; E-mail: tillanosoft@geocities.co.jp

TweakCE

A toolkit of utilities to customize your Windows CE H/PC or P/PC device running Windows CE 2.11. TweakCE includes the following tweaks: Turn off window animation (H/PC only) Speed up Pocket Internet Explorer (H/PC only). Modify file types Remove Windows CE databases. Remove programs from the Remove Programs list. Set paranoia items including clearing Temporary Internet Explorer Files, Pocket Internet Explorer History, Run History and Document History.

\$20; Download or demo available; AppStudio; www.appstudio.com; E-mail: sales@appstudio.com

CE Shopper.com™

Introducing the **new**
one-stop web shop
for Windows CE software!

.... brought to you by the creators of "The Palm-size PC Store"

Windows CE Shoppers

Find the largest selection of Windows CE software titles, accessories & components for your Palm-size PC, Handheld PC or Handheld PC Pro.

Transform your Windows CE device into a powerful business or leisure machine!

Purchase and download software instantly, and securely, via the Internet!

Windows CE Developers

Market your Windows CE software titles and accessories through the largest, most popular on-line Windows CE shopping site on the Net (and growing). Accept credit cards for the purchase of your software, or accessories.

Expose your products on a heavily advertised website - attracting a new & wide range of Windows CE customers daily.

PC Companions

What is a PC Companion? PC Companions are small, portable computers using the Windows CE operating system. All come with operating system and basic applications built in.

Reading This Chart: **Price** \$ U.S. unless otherwise indicated; **Display** e.g. 10" = diagonal measurement in inches; 800x600 = pixel resolution; 256c = displays 256 colors; Touchpad = pointing device if unit does not have a touchscreen; **CPU** e.g. 128 MHz = processor speed, SH4 = processor type. NOTE: you may need to know the processor type when you purchase 3rd party software for the device.; **RAM/ROM** RAM = memory available for running programs and storing data. ROM = used for permanent storage of built-in OS and applications. For example, 16(64) RAM means the PC Companion ships with 16 MB RAM which can be expanded to 64 MB RAM with an upgrade option; **Modem** a number in this column indicates a built-in modem and the max. speed it operates at; **Ports** I/O ports: A=Audio I/O jacks Cf=CompactFlash Slot Fd=Floppy drive M=MiniDRAM slots P2=PS2 Slot P=Parallel port U=USB V=VGA-out **Battery** indicates the type of battery used and the hours of continuous use you will get, according to mfg. specs.; **Size/Weight** dimensions of device, in inches (depth or length x width x height) and pounds, unless otherwise indicated; **Comments** additional features of note.




Handheld PC Pros

Windows CE 2.11+ operating system and Handheld PC Pro Edition of built-in applications. All units have backlighting; All but 3 units have touchscreens; All units have built-in microphones and speakers; All have PC Card slots, Serial, modem, and IrDA ports.




PC COMPANION	PRICE	DISPLAY(c=COLOR)	CPU	RAM/ROM	MODEM	PORTS	BATTERY	SIZE(DxWxT(LB))	COMMENTS
 Compaq Aero 8000 www.compaq.com	\$949	10", 800x600, 256c touchPad	128MHz 64-bit SH4	16 (64)RAM 16 ROM	56k	Cf,V,A,P2	L-Ion/ 7hr	10.75x8.5x1.2/95"	SmartCard reader; optional 13hr battery
 Fujitsu PenCentra130 www.fps.fujitsu.com	n.a.	8", 640x480 256c	131MHz MIPS	16 (48)RAM 24 ROM	56k	(2)U,P2	L-Ion/ 12hr	8.9x 6.5x 1.3 / 32oz	Pen-entry tablet; 8MB flash ROM built-in; software
 HP Jornada 820 www.hp.com/jornada	799	8.2", 640x480, 256c touchPad	190MHz ARM	16 (32)RAM 16 ROM	56k	Cf,V,U	L-Ion/ 8hr	10x7x1.2.5"	Optional 15hr battery
 HP Jornada 680 & 690 www.hp.com/jornada	899/999	6.5", 640x240, 256c	133MHz SH3	16 (32)RAM 16 ROM	56k	Cf,S	L-Ion/ 7hr	7.4x3.7x1.3/1.1"	Pocketable H/PC Pro; optional 21hr battery Jornada 690 has 32 MB RAM
 Hitachi HPW-600 ET www.hitachi.co.jp/Prod/hpw/	899	7.5", 640x480, 65Kc	128MHz SH4	16 (32)RAM 16 ROM	56k	Cf,V,U,A	L-Ion/ na	8.7x1.2x6.3/1.6"	Tablet H/PC Pro with no keyboard
 IBM WorkPad z50 www.pc.ibm.com	999	8.2", 640x480, 64Kc TrackPoint	131MHz MIPS	16 (48)RAM 20 ROM	33.6k	Cf,V,A	L-Ion/ 8hr	8x10.2x1.2/7"	Optional 16hr battery
 Itronix T-5200 www.itronix.com	varies	7.3", 640x240, mono	74MHz MIPS	16 RAM 16 ROM	33.6k	A	L-Ion/ na	na/na	Ruggedized H/PC Pro for vertical market applications
 NEC MobilePro 880 www.necscd.com/	899	9.4", 800x600, 64Kc	168MHz MIPS	32 (48) RAM 24 ROM	56k	Cf,A,V,U	L-Ion/8hr	9.6x7.5x1.2/5"	Mono headset jack
 NEC MobilePro 780 www.necscd.com	799	8.1", 640x240, 69Kc	168MHz MIPS	32 (48) RAM 24 ROM	56k	Cf,A,V	L-Ion/10hr	9.6x5.2x1.1/1.7"	Mono headset jack; Jap. version available. Only 1/2 VGA screen H/PC Pro with fully touchtypeable keyboard
 NTS Dreamwriter IT nts.dreamwriter.com	895	640x480, 256c	80MHz SH3	16 (64)RAM 16 ROM	33.6k	P,A,Fd	NIMH/ 8hr	15x11x2.5/5.5"	Built-in LAN adapter & Floppy drive
 Samsung IZI Pro www.samsung.com	est 850	8.2", 640x480, 256c TouchPad	148MHz MIPS	16 (48)RAM 16 ROM	56k	Cf,V,U	L-Ion/ 10+hr	8.94x7.76x1.1/2.2"	Not available in U.S.
 Sharp Mobilon TriPad www.sharp-usa.com	999	9.4", 640x480, 256c	90MHz MIPS	16 (32)RAM 24 ROM	33.6k	Cf	L-Ion/ 12hr	11.25x8.75x1.3/2"	Sleek; unique 3-position hinge for notebook, display, tablet functioning
 Sharp Mobilon Pro www.sharp-usa.com	899	8.2", 640x480, 4Kc	129MHz MIPS	16 RAM 16 ROM	33.6k		L-Ion/ 8hr	9.3x7.7x1.1/2.7"	Accepts optional digital camera card
 Vadem Clio C-1050 www.vadem.com	999	9.4", 640x480, 64Kc	168MHz MIPS	32 RAM 24 ROM	56k		L-Ion/ 12hr	11.25x8.75x1.3/2"	Sleek; unique 3-position hinge for notebook, display, tablet functioning
 WPI Husky FeX 21 www.huskyinc.com	1,900	6.5", 640x240, c/m	75MHz Toshiba	16 (32)RAM 16 ROM	33.6k	Cf,U	NIMH/ na	7.5x6.1x1.5/1.6"	Vertical market device. Flat, unhinged device with keyboard below screen

Handheld PCs

Windows CE 2.0+ operating system and Handheld PC Edition of built-in applications. All units have backlit touchscreens; All units (except the Velo 500) have PC Card slots; All units have serial and IrDA ports; built-in microphones and speakers. "Discontinued" devices are no longer being made, or may still be available in the distribution chain. We no longer list CE 1.0 H/PCs.

PC COMPANION	PRICE	DISPLAY(c=COLOR)	CPU	RAM/ROM	MODEM	PORTS	BATTERY	SIZE(DxWxT(LB))	COMMENTS
 Casio A20 www.casio-usa.com	\$600	6.5", 640x240, mono	80MHz SH3	8 RAM 8 ROM		Cf	AA/ 25hr	7.25x3.68x1/1"	Discontinued; long battery life; optional L-Ion rechargeable
 Casio PA-2400 www.casiohpc.com	n.a.	480x240, mono	80 MHz SH3	8 RAM 16 ROM	n.a.	Cf	L-Ion/ 15hr	0.8x 7x 4.25/1.1"	Vertical market; pen-entry only; accepts AA batteries
 Compaq 2010c www.compaq.com	899	5.9", 640x480, 256c	75MHz MIPS	8 (32)RAM 16 ROM	33.6k		NIMH/ 4hr	3.9x .3x1.6/0.95"	Accepts AA batteries; Upgrade chip to H/PC Pro available

At A Glance!

PC COMPANION	PRICE	DISPLAY (C=COLOR)	CPU	RAM/ROM	MODEM	PORTS	BATTERY	SIZE (mm/WT (LB))	COMMENTS
 Hitachi HPW-200EC www.hitachi-hpc.com	799	8.1", 640x240, 256c	100MHz SH3	16 (32)RAM 12 ROM	33.6k	Cf	L-ion/ 10hr	10.0x 5.2x1.3/1.8"	Upgrade chip to H/PC Pro available
 Novatel Wireless CONTACT www.novatelwireless.com	1,000	7.1", 640x240, mono	80MHz SH3	8 (32)RAM 8 ROM	14.4k	Cf	L-ion/ 8hr	7.6x4.9x1.2/1.5"	Landline and wireless CDPD modem; communications software
 Sharp Mobilon HC-4500/4600 www.sharp-usa.com	700	6.5", 640x240, 256c	74MHz MIPS	16 (32)RAM 16 ROM	33.6k		NIMH/ 6hr	7.3x3.7x1.2/1.1"	Accepts optional Digital Camera Card


Palm-size PCs

Windows CE 2.0 or 2.11 operating system and Palm-size PC edition of built-in applications; All units have backlit touchscreens; all units have CF slots, serial and IrDA ports.

PC COMPANION	PRICE	DISPLAY (C=COLOR)	CPU	RAM/ROM	MODEM	PORTS	BATTERY	SIZE (mm/WT (LB))	COMMENTS
 bCOM Mars www.bcom.com.tw	\$379	320x240, mono	75MHz MIPS	4 (8)RAM 8 ROM	28.8k		2 AA	5.4x 3.4x 0.8/8oz	Limited U.S. availability
 Casio E-10/11 www.casiohpc.com	399	320x240, mono	100MHz, VR411	8 RAM 8 ROM	14.4k	A	2 AAAs	4.9x 3.2x .72/6.6oz	Optional Modem add-on module, 19.2k; optional rechargeable battery
 Casio E-100/105 www.casiohpc.com	499	320x240, 64Kc	131MHz MIPS	16 (32)RAM 32 ROM		A	L-ion/ 10hr	3.3x 5.2x .80/8.9oz	Built-in MG3 player; stereo headphone jacks
 Compaq Aero 1530 www.compaq.com	300	240x320 mono	70 MHz MIPS	16 RAM 16 ROM		A	L-ion/ 14 hr	5.13x 3.11x 5 / 5 oz	Smallest, lightest Palm-size PC; readable monochrome screen; good battery life.
 Compaq Aero 2100 www.compaq.com	449-499	320x240, 256c	70MHz MIPS	8 (16)RAM 8 ROM		A	L-ion/ 10hr	5.3x 3.3x .78/11oz	Reflective TFT display readable in daylight; Headphone/microphone jack; vibrating alarm
 HP Jornada 420 www.hp.com/jornada	399	320x240, 256c	100MHz SH3	8 RAM 8 ROM		A	L-ion/ 6hr	5.1x 3.2x 0.9/8 oz	Stereo headphone jack, built-in MP3 player, excellent add-on software
 HP Jornada 430se www.hp.com/jornada	499	320x240, 65c	133MHz SH	16 RAM 8 ROM		A	L-ion/ 8hr	5.1x 3.2x .9/8.8oz	Transparent flip-over cover; MP3 stereo digital imaging
 MaxTech PD-910 www.maxtech.com	300	320x240 mono	66 MHz MIPS	8 RAM 8 ROM	na	A	AAA/ 20 hr	4.8x 3.2x 0.7 / 5.3 oz	Vibrating alarm; optional mobile cradle with 33.6K modem; looks like an OEM'd Everex Freestyle
 Norand PenKey 6100	3,675	5", 240x320, mono	naMHz AMD 386	(8)RAM / 1 FlashROM		S,LAN,Ir	L-ion/na	na	Vertical market; built-in charger
 Palmax PD-300 www.palmax.com	299	320x240, mono	60MHz SH3	2 (10)RAM 8 ROM		A	AAA/ na	4.9x 3.2x .8/6.5oz	Limited availability in U.S.
 Philips Nino 510 nino.philips.com	300	n.a.	75MHz MIPS	16RAM ROM na		A	NIMH or AA/ 8h	3.4x 5.3x .75/8oz	Optional add-on 19.2k modem module
 Symbol PDT 7500 www.symbol.com	n.a.	240x160, mono	66MHz AM486	na RAM na ROM	na	Ir,Scan*	L-ion/ 10hr	3.5x 2.2x 8.4 / 1.3"	*Vertical market "smart scanner"; WAN data transmission options
 Telxon PTC Series www.telxon.com	n.a.	240x320, mono or 640x480, mono	100MHz AMD Elan	4 (64)RAM 512K PROM			L-ion/na	varies / 1.5 to 2.5oz	3 vertical market, pen-entry devices; built-in barcode readers, rechargers and wireless options
 Trogon Palm Power www.trogoncomputer.com	215	320x240, mono	54MHz MIPS	4 (16)RAM 8 ROM			NIMH or AAA/ 20hr	4.8x 3.2x .64/5.3oz	Optional docking cradle with 33.6k modem; vibrating alarm
 Uniden www.uniden.com	380	320x240, mono	75MHz MIPS	4 (8)RAM 8 ROM	28.8k		AA/ 15hr	5.5x 3.4x .74/na	

Auto PC

Windows CE 2.0 operating system and Auto PC built-in applications. Uses voice command and buttons to access features. Comes with AM/FM tuner, CD player, 35 watt 4 channel amplifier and computer in an integrated unit that fits in the dashboard of the automobile. Includes phonebook, navigation, voice recognition and control software.

 Clarion Auto PC www.autopc.com/index2.html	\$1,299	6", 256x64, 8c	naMHz/ SH3	16 RAM 8 ROM		Cf,U	12v auto battery	na*	Option: GPS, turn-by-turn directions, cellphone cradle, wireless receiver, vehicle diagnostic module * Size of an in-dash AM/FM stereo
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Quick Tips & PC Companion Tricks

by Jim Christian



Associate Editor, Handheld PC Magazine; Sysop, CompuServe's Windows CE Forum; Associate Forum manager, MSN's Windows CE forum.

Error Messages? Try the Microsoft Knowledge Base!

Microsoft's online Knowledge Base is a great source of technical information and self-help tools for any of Microsoft's products, including Windows CE. The main search page is located at: <http://search.support.microsoft.com/>. The Advance Search dialog box is shown in Screen 1.

Listed below are a few of the short support articles found in the Knowledge Base (along with the article ID number).

- Error Message: Synchronization Cannot Be Started ... (Q243029)
- Error Message: Mobile Channel Error (Q242256)
- Cannot View Entire Program Running Terminal Server Client (Q241417)
- Appointment Change on Desktop Computer Not Updated on Windows CE (Q240223)
- File or Folder with the Euro Symbol in Its Name Is Not Copied (Q240188)
- "Unrecognized Format" Trying to Open Converted Access Database (Q240074)
- Multiple Files Are Not Copied from Mobile Device to Desktop PC (Q239932)
- Clock and Appointment Times Incorrect After Backup and Restore (Q239529)
- Error Message: "Device Not Recognized" with Serial-to-USB Hub Synch (Q245687)

Security tip: Hiding files on your H/PC

If you're foolish enough to leave your PC Companion laying around, it could get lost or stolen. A quick way to make a docu-

Advanced Search [Go to Basic Search](#)
Search the Microsoft Knowledge Base of technical support information and self-help for Microsoft products.

1 My search is about:
Windows CE [List all Microsoft products](#)

2 I want to search by:
☒ Keyword Search using
☐ Specific article ID number
☐ Specific driver or downloadable file
☐ Specific troubleshooting tool
☐ Asking a question using a free-text query
☐ What's new within the last day(s)

3 My question is:

My last 10 searches:

Screen 1. Microsoft's online Knowledge Base is a great source of technical information and self-help tools for any of Microsoft's products, including Windows CE. Shown here is the search dialog box filled out to list articles related to Error Messages on Windows CE devices.

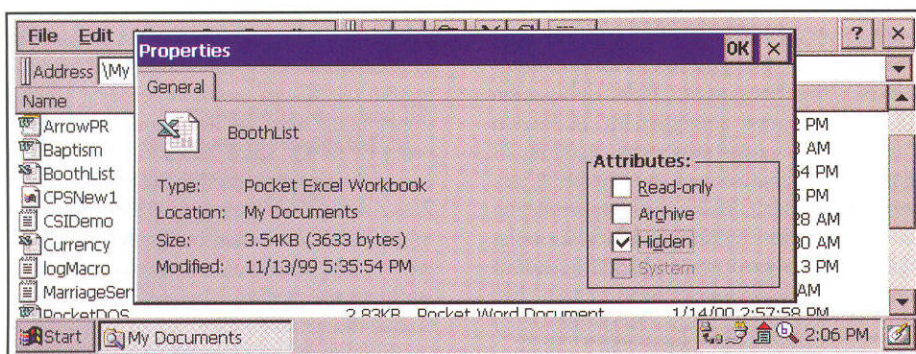
ment (or any file) a little more secure is to make it disappear — to hide it from normal view. Most File Explorer programs (desktop PC or PC Companions) let you do this. On your H/PC, open Windows Explorer or My Documents and find the file you want to hide. Then hold down Alt, tap the file once, and select the Properties option (see Screen 2, next page). Tap the check-box labeled "Hidden" and then tap OK. The file will disappear from view in your File Explorer, but it's still there.

To find the file later, open your H/PC's Windows Explorer, select View, Options, tap on the button labeled "Show all files" and tap OK. All files you have hidden, and system files with .DLL and .CPL extensions

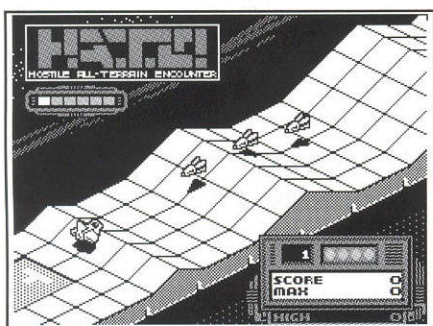
will appear in Windows Explorer. You can then Alt-tap any of the now-visible hidden files and de-select the Hidden option.

Hiding files on Palm-size PCs

The procedure for hiding a file on a Palm-size PC is a little different. First of all, Palm-size PCs don't have Windows Explorer built in. You have to download and install a third-party File Explorer program. A number are available, including the CSI File Explorer (in the CSI PowerPack, www.casiosoft.com); EzExplorer (in the EzToolPack, www.ezos.com); Tascal Filer Ex (www.2r.biglobe.ne.jp/~tascal/) or CCExplore (www.csq.cc/).



Screen 2: To hide a file, open Windows Explorer or My Documents and find the file you want to hide. Then hold down Alt, tap the file once, and select the Properties option. Tap the check-box labeled "Hidden" and then tap OK.



Screen 3: The Spectrum emulator lets you play H.A.T.E. & W.C.E. Le Mans (shown here) and over 6,000 other game programs written for the old Sinclair/Timex Spectrum computer.

Open the File Explorer, find the desired file, tap on it once to select it, find the File Explorer's Options or Properties menu (usually on the File or View menus), and select the Hide File or Hidden selection.

If the person who finds or "borrows" your PC Companion is computer savvy, he or she will be able to find your hidden files. But novice snoopers and thieves probably won't think of that. Of course you have a recent backup to restore your lost information.

Linking a Casio E-100 to a mobile phone

If you're thinking about using a mobile phone with the Cassiopeia E-100/105 to send and receive e-mail, check out Richard F

Cooke's experiences (www.casioe-100.com/journey_5.htm). He gives excellent, step-by-step instructions on how he configured his Casio E-105 and a Motorola L7089 (Timeport) mobile phone to do this.

Format your desktop PC Word documents to look better on your P/PC

The Palm-size PC is a great way to have important information with you, to access wherever you are. You can even take Word documents with you and open them in Note Taker to read or modify. To do this, however, you have to use ActiveSync to copy them from your desktop PC to your P/PC and translate them to Note Taker format.

The only drawback is that sometimes the converted Word document doesn't display well on the 240 x 300 pixel screen of the P/PC. This is especially true if you have a lot of formatting in the document. To deal with this problem, I created a "blank note" for my desktop PC version of MS Word. I use this note when I'm creating documents on my desktop PC that I know I will copy over to my P/PC. Here's how you do it. (I used Word 2000's default metric units.)

1. Open a new blank document in MS Word on your desktop PC
2. Go to 'Page Settings'
3. Change paper margins to:
Upper margin = 0 cm
Lower margin = 0 cm
Left margin = 0.2 cm
Right margin = 0.2 cm
(choose "ignore" when a message appears about the upper margin)
4. Change paper size to:
Width = 6.4 cm

Height = 5.5 cm

5. Leave the settings menu
6. Change the font to TAHOMA and Font size to 8.
7. Choose Save As, go to the Save as type: field and select Document Template from the pull-down list.
8. Save the document as "Blank Note."

Any time you want to create a Word document that is formatted correctly for Note Taker on your P/PC, go to Word's File menu, select New and open the Blank Note template. When you're finished, save the document under a different name. When you use ActiveSync to copy it to your P/PC and translate it to Note Taker format, it will display properly.

Connect your Palm-size PC to the Internet through your desktop PC

Mike B (I don't have his last name) figured out a way to connect his Palm-size PC to the Internet using his desktop PC as the middleman. The Palm-size PC is connected to the desktop PC via data cradle and serial cable. The desktop PC is connected to the Internet. For his step-by-step instructions, go to <http://clubs.in-touch.net/heartwalk/proxy.html>.

Get over 6,000 free Spectrum games

Some of you oldtimers may remember all the great games written for the Sinclair/Timex Spectrum computer in the 1980's. They're still lots of fun to play, and someone has written an emulator program for Windows CE devices that lets you run those games on an H/PC, H/PC Pro, or Palm-size PC. You can get the emulator for free at www.palmtop.nl/ce/ppc_spectrum.html. You'll also find links to over 6,000 Spectrum games, including H.A.T.E. and W.C.E. Le Mans (see Screen 3), Elite, Boulderdash and more.

UpLink: Microsoft's new "Pocket PC" support site

Microsoft recently announced UpLink (www.microsoft.com/windowsce/uplink/), a new user-community Web site for Pocket PC (formerly "Palm-size PC") users. The goal of UpLink is to showcase the innova-

tive things people are doing with their Pocket PCs and to share these experiences with others. What makes UpLink unique is that the editorial content for the site comes almost entirely from Palm-size PC enthusiasts who are highly regarded in the industry; Microsoft merely hosts the pages. Visitors to UpLink will have access to extensive resources and free downloads, but UpLink will combine these resources with the knowledge, ideas and experiences from authors of the site to help users get the most from their Palm-size PCs. (See page 45 for Tom Gibson's first look at UpLink.)

Traveling to another country? Add its holidays to Calendar

If you're traveling in another country, it's good to be aware of the local holidays. The desktop PC version of Outlook lets you add a country's holidays to Calendar. Once the holidays are in Calendar on your desktop PC, you can synchronize with your PC Companion and carry them with you in Pocket Calendar. Here's how you do it:

1. Open the desktop version of Outlook.
2. Go to the Tools menu, select Options and from the Preferences tab click on the Calendar Options button.
3. Click on the Add Holidays button and a checklist with over 70 countries is displayed.
4. Select the desired country (or countries) and press OK. The holidays celebrated in those countries are added to Outlook's Calendar on your desktop PC.
5. Synchronize your PC Companion with your desktop PC to copy the holidays over to Pocket Calendar. That's all there is to it.

Free trial: Economist Diary Companion — worldwide date reference

Economist Diary Companion helps you keep up to date with public holidays, sporting events, culture, business and finance, etc. You can also get instant access to reference data, including measurement, time, travel, communication, science, economics, finance, etc. Download and install the free trial version for Outlook 97/98/2000. A setup wizard allows you to choose from over 5,000 worldwide dates, anything from the next election day in Panama to the next performance of Madame Butterfly in San Francisco. You can save this information in a text file or transfer to your

desktop version of Outlook. When you synchronize your PC Companion with your desktop PC, the Economist Diary Companion information gets downloaded to Pocket Outlook. Download the trial version of Economist Diary Companion from the Microsoft Office Update Web site at <http://officeup.date.microsoft.com/2000/downloadDetails/ediary99.htm?s=/downloadCatalog/dldoutlook.asp>.

ActiveSync 3.0 on CD ROM

ActiveSync 3.0 is a great improvement over the last version of Windows CE Services. You can download it for free at www.microsoft.com/windowsce/Products/download/list.asp.

The ActiveSync installation file is over 3 MB in size and may take a while to download. It should be downloaded to and installed on your desktop PC. If you have a slow Internet connection, start downloading the ActiveSync file after work or when you're heading off to lunch. If you have a really slow connection or don't want to bother with the download, or if you don't have an Internet connection, you can get ActiveSync 3.0 on CD ROM directly from Microsoft by calling 800-565-3061. There's no charge for the CD, but you have to pay \$8.95 for shipping and handling.

Find e-mail messages using Find and sorting your Inbox

Finding the right message can be a problem, especially if you keep a lot of e-mail in your Inbox, Deleted folder, or archived in a separate Inbox folder. One way to find the message is to go to the Inbox, or the appropriate folder and press (Ctrl+I) to activate Find Message. Type in a unique bit of text from the message you're looking for. For example, if it's about ActiveSync, type in "ActiveS" and hit the Find Now button. You'll go to the first e-mail message with that word. Note: you don't have to type out the full word, just that portion that will uniquely identify the phrase. Keep it short — the Find goes faster.

Another way to find a message is to go to the message folder and sort the columns (From, Subject, Date, and Size). For example, if you're looking for messages from a particular person (i.e., Rich Hall) tap the "From" column label once and the entire list of messages will be sorted alphabetically (A to Z) by the first name of the originator. Go

down the list until you get to the R's and all of Rich's messages will be organized together. Tap the "From" column header a second time and the message list is sorted in reverse order (Z to A). Since "Rich" is towards the end of the alphabet, sorting the From column Z to A brings his messages closer to the top of the list. You can sort by the description in the Subject header of the message, the date and time the message was received, and the size of the message.

Finally, if you receive a lot of attachments with your e-mail, you might want to save internal storage space by saving the attachments to your PC or CF storage card. Open Inbox, go to the Services menu, tap on Options, and go to the Storage tab. Select the button labeled "External Storage Card" and choose the card from the drop-down list.

Spell check your H/PC Pro's Inbox

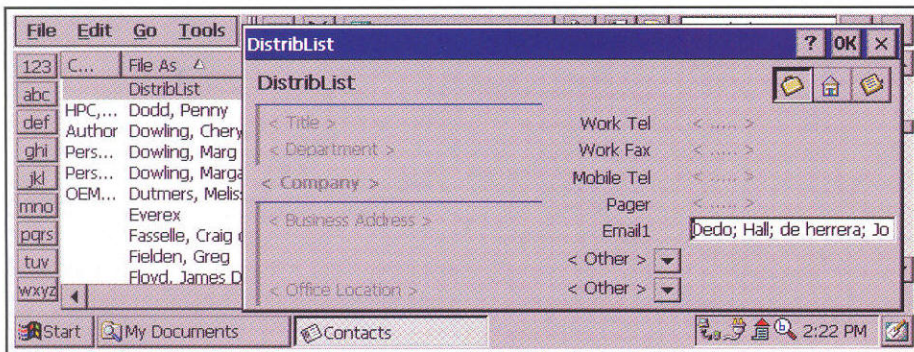
Microsoft's Windows CE Plus! Pack for the H/PC Pro comes with an Inbox spell checker that allows you to check messages before you send them. You can download it free at www.microsoft.com/windowsce/Products/download/list.asp

Make an e-mail "distribution list" in Pocket Outlook

If you regularly send the same e-mail message to a specific group of people, you need to create a "distribution list." It can be done relatively easily in Outlook (or almost any e-mail program) on your desktop PC. This feature is not included in Pocket Outlook, but there is a simple workaround to create one or more distribution lists on your PC Companion.

Go to your Contacts list and create a new contact. Name it "DistribList" or whatever you want. Then, go to the data field labeled "Email1" and type in the e-mail address of each person you want on the distribution list (separate each address by a semicolon). If the names are already in your Contact list, you can simply type in their last names into the Email1 field (separate each by a semicolon; see Screen 4). If you have two contacts with the same last name, you'll have to type in the complete name (i.e., Smith; Jones; Hall, Richard; Hall, Anna; etc.).

When you want to send a message to your distribution list, open Contacts, highlight DistribList, pull down the Tools menu and select Send Mail to Contact. It will insert all the names you entered.



Screen 4: To create an e-mail distribution list on your PC Companion, go to Contacts, create a new contact with the name "DistribList" (or whatever you choose), and enter the e-mail addresses in the "Email1" field, each address or name separated by a semicolon.

Back up your desktop PC's Outlook 98 address book

I've hassled you before about the importance of backing up important data that resides on your PC Companion. Perhaps the easiest way to do this is to synchronize your PC Companion with your desktop PC on a regular basis. At the very least, once a week, but more often if you make a lot of changes to Contacts, Tasks or Calendar.

To be completely safe, backup your desktop PC's Outlook files. True, it's not likely that both your desktop PC and PC Companion will go bad or get stolen at the same time. But you make backups to cover unlikely events.

An easy way to backup your desktop PC's Outlook information is to export the information to a *.csv text file (Comma Separated Values). You can save this file anywhere and import it back into any desktop PC version of Outlook if the need ever arises. The procedure varies slightly depending on which version of Outlook you are using on your desktop PC. In general, you'll follow these steps:

1. Open the Outlook Contacts application (sometimes called the address book).
2. From the File menu, select the Import (or Import and Export) option.
3. If the Export Tool dialog box pops up, select Text File (Comma Separated Values) and click Export.
- 3b. If the Import and Export Wizard pops up, select Export to a file and then Comma Separated Values (DOS).
4. Select the location where you want to save the *.CSV file (hard drive, floppy drive, network, etc.).
5. Save the file.

Now let's suppose you want to import that information back into Outlook (on a second system at home or on a new system).

1. Open the Outlook Contacts.
2. From the File menu select the Import (or Import and Export) option.
3. Select Address Book and then Text File (Comma Separated Values) options.
- 3b. If the Import and Export Wizard opens, select "Import from another program" and then "Comma Separated Values (DOS)."
4. Use the browser that pops up to find the *.csv file you want to import. Select this file and click Open and then Next. You are presented with a screen that lets you map data fields (i.e., tell the program where to put certain information).

5. If necessary, map any fields. Then click Finish. When you see a message telling you that the Address Book import has completed successfully, you may...

6. Click OK, then close.

You can also import *.csv files into Excel and Access.

Increase viewing space – hide the Taskbar

The Taskbar is the gray bar at the bottom of the screen with the Start menu button (on the left) and the time (on the right). Open applications also appear on the H/PC and H/PC Pro's Taskbar. Screen space is scarce on your PC Companion. To give you more, configure the Taskbar to "auto hide" when you're not using it.

1. From the Start menu, select Settings and then Taskbar.
2. Check the "Auto hide" box. Tap OK.

The Taskbar should immediately disappear. Whenever you need it, tap your stylus on the very bottom of the screen and it will appear. On the H/PC or H/PC Pro you can press the Windows Start key (bottom left of the keyboard) to bring up the Start menu and Taskbar. As long as the Start menu is up, the Taskbar will be displayed.

You may not need to activate Auto Hide on the larger screened H/PC Pros, but the added display space is welcome on the smaller H/PCs and P/PCs.

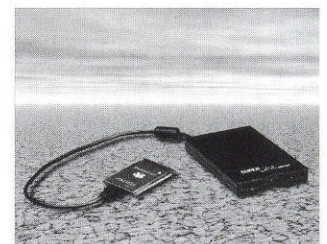
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Now enjoy the benefits of the same drive as desktop and notebook users! Use it with standard 3.5" 720 Kb and 1.44 Mb diskettes. Or with 120 Mb SuperDisk diskette media. Eliminate the need for connectivity kits and a notebook or desktop PC, just to transfer files to another diskette or hard drive. Use it to download large files from the Internet, run large graphics presentations, transfer files between your H/PC and notebook or desktop computer, and even to run or load programs from a floppy. Save costly space on your compact flash and PC memory cards, or free up system memory on your H/PC. Carry it anywhere. It's small enough to fit in your jacket pocket!

Compatible with Windows CE 2.0, Windows 95 and 98, Windows NT, Windows 3.X and DOS - use it with all of your computers.



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Start a numbered or bulleted list quickly

Numbers and bullets are a great way to organize a list of items in any document. Use bullets when the sequence is not important. For example, a well-organized document is...

- Easier to understand
- Saves the time of the reader
- Produces better results

Use numbers when the sequence of items is important. For example, a list of sequential steps involved in writing a well-organized document might be:

1. Write the main thing you want to accomplish in the document in one clear sentence.
2. Write out the the document's three to five main points.
3. Sketch out a rough outline of the article.
4. Write the document.
5. Read the document, have a friend read it, collect feedback, and write the final version.

You can use numbers instead of bullets in some cases, even if the sequence is unimportant (i.e., a list of 10 "must-have" applications for your PC Companion). But whenever you use a numbered list, readers may make an assumption about sequence or order of importance.

You can create a numbered or bulleted list in Pocket Word by opening the Format menu, tapping on Paragraph and checking the appropriate style button. You'll also find buttons on the Formatting toolbar that let you select bulleted or numbered lists (they come right before the spell checking button in Pocket Word). To create a list, tap on the bullet or number button, create your list of items, and then tap on the bullet or number button one more time to return to normal typing. A quicker way to start a numbered list in Pocket Word is to press Ctrl-Shift-J.

Add e-mail sender to your Contacts list

If you've just received an e-mail message from someone who is important enough to add to your Contacts list, Outlook makes it easy to do. If you're on a Handheld or Palm-size PC, open the e-mail message in Inbox, pull down the Compose menu and select Add Sender to Contacts. A new Contact card pops up with the individual's name and e-mail address already filled in. Sometimes the name will be missing or bracketed in quotation marks. Edit the Contact card, cut and

paste missing information (from the body of the message) and tap OK.

The process is a bit easier in the desktop PC version of Outlook. Open the message in Inbox, right-click on the e-mail address of the sender and select Add To Contacts. Fill in the rest of the Contact information and then click the Save And Close button. You can use this technique for any e-mail address listed in the message header — not just the sender's.

Attention: HAM Radio users

Windows CE devices come with a built-in terminal program that should work for packet operations with, say, PK-88. Check out www.qsl.net/kc7gnm/packet_hpc.html for setup instructions. Also, WinAPRS (Automatic Position Reporting System) for Windows CE will be coming soon, if that will help you.

Power down PC Companion with Poof!

The folks at www.foliage.com/ce have created Poof, an unsupported program that powers off your Windows CE device whenever you tap its Icon — just like pressing the power off button. Poof may be helpful if you have a hard time finding the Off button, particularly on a Palm-size PC. It might even save a little wear and tear on that button.

Play Sega games on your H/PC

Unicorn is cool game console emulator suite for Windows CE. It consists of the following four emulators (only the first, Unicorn/MG, is available at this time). Get it at: www.jimmy.com/Unicorn/index.html.

Unicorn/MG — GameGear and Sega Master System (SMS) emulators.

Unicorn/GB — GameBoy emulator.

Unicorn/NES — Nintendo Entertainment System (NES) emulator.

Unicorn/Pro — Include all of the above emulators and Colecovision emulator combined into a single emulator.

View Zipped files on your PC Companion, without unzipping them

I carry around a lot of e-photos with me, including pictures of my family, friends, pets, vacation stuff, and cool images I've found.

Electronic images (JPGs, Tiffs, bitmaps and the like) can take up a lot of storage space. So I archive them in ZIP files. Usually, I ZIP the files on my desktop PC and transfer the single archive file to my PC Companion. Then, I use Steve Miller's Pocket UnZip (<http://stevemiller.net/apps.html>) to view the images directly from the Zip archive file. I can extract them if I want, but I don't have to. Again, it is free! A Jim's "Must Have."

Another free utility is CCZip (www.csq.cc/). CCZip is a compression tool viewer for Palm-size PCs running Windows CE 2.11 or higher. CCZip can open ZIP archives created on your desktop PC. You can extract and remove files from the archive. You can even create new archives and add files to existing or new archives. Note, however, that due to a P/PC's memory and speed limitations, CCZip will usually yield somewhat lower (about 20-30%) compression ratios than compression software on a desktop PC. CCZip does not run on H/PCs, as Pocket UnZip does.

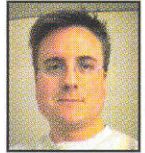
Problems synchronizing Pocket Access with Office 2000?

After I upgraded to Office 2000 on my desktop PC, I couldn't synchronize my Access and Pocket Access files. The solution was to delete my ActiveSync partnership, reconnect my PC Companion to my desktop PC, and re-establish the partnership. Everything was fine after that.

Save your batteries — just say "No!"

PC and CF Card modems and PC/CF Card devices draw a little power when in use. You can save power by not inserting them in the Card slot. But then you've got to carry the card around and you might lose it. There's another solution. Each time you insert a PC or CF Card, your PC Companion asks you if you want to use the card. To conserve battery power, just say "No!" The card won't draw any power, but you won't be able to use it until you take it out and reinsert it. The battery power you conserve won't be much, but it might come in useful on a long international flight. ■

Steve
Seroshek



Perform Synchronization via Remote Access Server With Your Windows CE-based Device

For the past couple of years, one of the highlights of using a Microsoft® Windows® CE-powered device has been maintaining data that is "in sync" on both your Windows CE-based device and Windows-based desktop PC. With the first version of Windows CE, you could only perform synchronization via serial cable. This was very limiting.

However, with the advent of the Handheld PC and Palm-size PC powered by Windows CE 2.0 and the introduction of ActiveSync™ technology, synchronization

endar and contacts, add tasks to his or her to-do list, mark other activities as complete, edit documents, and answer e-mail messages. Meanwhile, the desktop computer will continue to download new incoming mail, and other Outlook information.

While on the road, the user may choose to combine his or her data on the desktop PC with the data on the Windows CE-based device, and vice versa. In order to get the same information in both places, synchronization will need to be done.

In large corporations, a dial-up RAS

corporate network. You also need to make a remote networking connection for RAS. Finally, depending on your company's security policies, you may need to be granted access to use RAS on the corporate network.

Once this is done and you've received the information necessary to complete a RAS connection, follow these steps to connect:

1. Create a RAS connection. From the Start menu, open Programs, Communication, Remote Networking (or Connections on the

***A** typical scenario for a corporate user is to use a desktop PC at the office and a Windows CE-based device on the road. In order to have the same information in both places, synchronization will need to be done.*

is much more flexible. Now you can synchronize via infrared connection, modem, Ethernet card, and even Remote Access Service (RAS). In this article, we'll examine the steps to follow if you want to use ActiveSync via RAS.


RAS: A Typical Scenario

Many Handheld PC and Palm-size PC users work in a corporate environment. A typical scenario for a corporate user is to use a desktop PC at the office and a Windows CE-based device on the road. While traveling, a user will most commonly update cal-

connection is frequently provided so that mobile users can access network resources from a remote location. On a Windows CE-based device, connecting via RAS is very similar to connecting to an Internet Service Provider (ISP). You will need to create a remote-networking connection with your corporate RAS settings. For specific settings and requirements, you should contact the Information Technology (IT) group within your company.

When attempting to synchronize via RAS connection, several issues need to be addressed. The Windows CE-based device remembers the names of the machines with which it last synchronized. So, in order for synchronization via RAS to take place, the work machine that you want to synchronize with must be turned on and connected to the

Steve Seroshek is a Microsoft support professional for Windows CE-based devices. More information from Steve can be obtained from www.microsoft.com/windowsce.



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Palm-size PC). Double tap Make New Connection. Name your connection, select Dial-Up Connection, and then press Next. Configure your modem (if necessary) and use the information from your IT department to set up the TCP/IP Settings for a remote connection for RAS. (If this information is



Screen 1: The ActiveSync icon should be visible on the taskbar of your desktop PC.

dynamically assigned when you dial in, you may be able to accept the defaults.) Tap Next. Finally, enter the phone number for your RAS connection and press the Finish button.

2. Launch the ActiveSync application on your Windows CE-based device. This is found on the Start menu under Programs, Communication.

3. You will now see a window titled

"ActiveSync." In the first dropdown box, select the type of connection. In this case, choose the RAS connection you created and named in Step 1.

4. In the second box, you will see the name of the machine with which the Windows CE-based device last synchronized. If it's not the name you're looking for, select the correct machine from the dropdown list.

5. Once you've selected the proper settings, click the Connect button. You may see a remote networking window. If so, enter the appropriate information and click Connect. The Windows CE-based device will then dial the number specified in your RAS connection settings. Once you are authenticated by the RAS server, the system will automatically launch the ActiveSync software on the desktop machine, which will scan both sys-

tems and determine if there are any items out of date. The software will notify you if there are items that are out of date and give you the option to Sync Now or Disconnect. If you opt to Sync Now, the software will synchronize the data on both the desktop PC and Handheld PC. The Disconnect button will terminate the process without synchronizing.

Things to Know

In order for synchronization via RAS to work, you must have a Windows-based PC ready to synchronize and connected to the corporate network. You do not need to leave the Mobile Devices window open. You should check to be sure the ActiveSync icon is visible in the lower right-hand corner of the desktop PC's taskbar (see Screen 1). By default, this software should load whenever you start your PC. When this icon is showing, the machine will detect when a device is trying to connect and automatically synchronize using ActiveSync.

You must first partner with your computer via serial connection before attempting to connect via RAS. Also, you should know the machine name for your computer in which you wish to synchronize with. This is important to the synchronization process. You set this information in the Identification tab of the Network control panel on your Windows-based PC. The device stores this name when the partnership is first established. When you launch the ActiveSync application on your Windows CE-based device, it displays the name of the machine with which you last synchronized. Whenever the device connects to a partner computer, it updates the computer name — even if the computer name has changed.

With the several options available, Windows CE device synchronization can be done from just about any location — whether in or out of the office. Remember, remote synchronization is ideal for users who have both a desktop PC connected to a corporate network with RAS capabilities and a Handheld PC or Palm-size PC that is used as a source of information and a tool for processing it while away from the desktop PC.

With this combination, synchronization via RAS may just be the best option. ■

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Andrew M. Seybold



Wireless Productivity: Bluetooth and the Wireless Internet

Out of the box, most Windows CE PC Companions are pretty useful devices. They synchronize with your desktop calendar, phone book, and other PIM functions when connected to your desktop. When you are away from your desk, they become an untethered extension of your desktop. You can take notes and run a variety of applications.

But remotely connecting and synchronizing a PC Companion is a complicated task that needs to be made much simpler. You need to be able to check your e-mail or instant messages, retrieve information from the Internet (notice that I did not say "surf the Web"), and connect back to your desktop system from wherever you happen to be. In short, the real value of these small devices is to be able to use them in both a connected and unconnected mode – and to be able to connect to your desktop when you are away from the office.

During the recent COMDEX Fall and Winter Consumer Electronics Show, we saw a number of wired modems for these systems. Many of these are in the conventional PCMCIA PC Card form factor. But some of the newer wired modems are available as CompactFlash cards and will work with the PC Companions or other portable devices with CF slots. Wired LAN adapters, and even a few wireless cards are also available in PC and CF formats.

Delays in developing wireless communication

One of the reasons there are so few wireless modems is that the industry has discovered a "new" form of communications called "Bluetooth." Bluetooth is a wireless technology using the 2.4-GHz unlicensed spectrum developed by Ericsson and adopted by Intel, Nokia, Motorola, IBM, Toshiba, Compaq, and now Microsoft. Think of Bluetooth as a "wireless wire" designed to connect devices over a relatively short range

(10 meters, 30 feet or less). The idea is that Bluetooth will be built into PC Companions and other PDAs, as well as cellular or PCS phones. Then we will be able to "connect" our PC Companion to our wireless phone without using a physical wire.

Bluetooth is a great technology. It has been demonstrated at Wireless IT and COMDEX/Fall, at the Bluetooth developers conference, and most recently at the Winter CES in Las Vegas in January. You will see Bluetooth modules this year that are designed to plug into both PC Card and CompactFlash slots of PC Companions. You will also see Bluetooth adapters for wireless phones. Bluetooth appears to be the perfect solution for those of us who have wireless phones and want to extend our wireless capabilities beyond voice into the world of data.

But there are some caveats that you need to be aware of before you plunge in and outfit yourself with Bluetooth modules for your PC Companion and your wireless phone. The first of these is that version 1.0 of Bluetooth requires a one-to-one relationship between devices. The ultimate specification will enable you to "discover" other Bluetooth devices that are in close proximity to your own and allow one or more of them to communicate with your Bluetooth device. However, in the first release you will only be able to establish a relationship between two specific Bluetooth devices. If you have a Bluetooth-enabled PC Companion and a Bluetooth-enabled wireless phone that is capable of data (many wireless networks do not support data today), you will have to be satisfied with configuring them to talk to

each other exclusively.

Wireless synchronization a must

Bluetooth will enable you to use your wireless phone as a wireless modem for your PC Companion. From the PC

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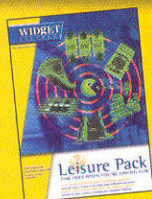
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Companion you will be able to command the wireless phone to make a wide-area connection to the Internet and browse the Internet using the browser on your PC Companion. This is an interesting and perhaps entertaining use, but not a compelling one for me. What I really want to be able to do is wirelessly synchronize my PC Companion with my desktop PC. Over time, many companies will offer this type of connectivity. But at the moment, most do not support PC Companions.

Web synchronization solutions are currently very popular with mobile laptop PC users. It works the same whether you use Yahoo!, Visto.com, or another site. You download a small application that resides on your desktop PC. This application synchronizes the information on your desktop PIM (and in some cases files) to a Web site (the information is protected by a password). You can set the software to synchronize your desktop PIM every hour, two hours, twice a day, or whenever you want it to occur. When you are on the road you can use a laptop PC to access the PIM information stored on the Web site, without having to worry about penetrating a company firewall.

I have been using Visto.com for some time now to synchronize my calendar, phone book, e-mail, to-do list, and even files. I am currently in a hotel in Dallas and have just updated my notebook with my most current calendar and additions that my administrative assistant made today to my phone book. I cannot do this with my PC Companion as I write this article. But the chances are pretty good that by the time you read it, a PC Companion solution will be available.

Productivity Gains

Today, if you want to be able to access information remotely and wirelessly with your PC Companion, you need to be a tech-savvy computer user. Setting up the

wireless connection, accessing your own desktop or server-based information, and making it all work together is no easy task. It is certainly not an undertaking for the faint of heart. Having said this, I do believe that it is worth the effort to figure out how to make PC Companions even more valuable by extending their ability to communicate using both wired and wireless technologies.

Over the next year or so, with Bluetooth products coming to market, with more wireless networks supporting data access, and with Web sites such as Visto.com, it will become easier to establish remote communications with your desktop. In the meantime, if having access to the Internet or your own information is important to you, it is still possible to put together a system that will accomplish this. But it isn't easy.

The Wireless Internet

You will be hearing a lot about the “Wireless Internet” in the coming months. But unless you use a Web synchronization program such as Visto.com, your personal data does not reside on the Internet. However, if you can gain access to the Internet, you can use the Internet to bridge the gap between your own data and your PC Companion. It is important to understand that connecting to the Internet is only the first step, and that the process of accessing the information you really want and need will get easier!

Coming: The state of the wireless industry

I have been asked to put together a “state of the wireless industry” tutorial as it relates to PC Companions. I will provide the first of a two-part series next issue. In the meantime, if you want to find out what networks will be offering wireless data access and in what time frame, visit our www.wirelessroadmap.com Web site. ■

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Tom Gibson
Technical Editor



Uplink: Microsoft's New Support Site for the Pocket PC

An "uplink" is the transmission of important information from someone who knows to someone who needs to know. In that sense, you could consider *Handheld PC Magazine* an uplink of important information from our contributing writers to our readers. Well, when Microsoft recently launched a new Web site to support users of Pocket PCs (Palm-size PCs), they gave it an appropriate name – "Uplink!"

Uplink (www.microsoft.com/windowsce/uplink/) is an online "e-zine" that came into being in December of 1999 and is "published" (i.e., updated) bi-weekly. Microsoft has made a couple of previous attempts at a Windows CE e-zine, but Uplink is by far the best. Uplink has lined up some top-notch contributing writers, including Chris de Herrera, Todd Ogasawara and Craig Peacock (who also contribute to *Handheld PC Magazine*) along with Jason Dunn, Frank McPherson and Tedd Riggs (who can write for us anytime they want).

The site is well laid out and it's easy to find your way around it. More importantly, it has lots of good information, for both the novice and experienced Windows CE user. This includes short articles and reviews that cover Pocket PC related Accessories, Communications, Games, Internet resources, Multimedia programs, Productivity enhancers, and more. You'll also find an interesting tips section (e.g., Dealing with Error Messages; Viruses on Windows CE), an archive of short "How-To" articles (Configuring for the Internet; Accessing Newsgroups), and an "Ask the Expert" page with answers to common questions.

A look at the December 15 edition

As I mentioned above, the site is updated every two weeks. This seems to involve publishing 2 or 3 short articles on a giving topic, a couple of unrelated reviews, and additions to the tips and how-to section. To



give you a little flavor of what the site has to offer, I'll give you a brief guided tour of the December 15 edition.

The theme of the issue is "The Wireless Connection." The main story, "The Magic of Wireless" by Chris de Herrera, describes various ways to use wireless communications to access e-mail and the Internet wherever you are. The other main articles for this issue were reviews of the Socket Digital Phone Card and of Microsoft's Web on the Go. Unrelated articles published on December 15 include reviews of HP's CapShare 920 portable e-copier, Conduits Technologies' Pocket Player (an MP3 player) and Phatware's HPC Notes, a sophisticated note taker and organizer.

While this issue will not be the current issue by the time you read this, you will be able to find these articles by searching the site (use the "Index and Search" option). I spoke with the Editor of Uplink. He said,

"Uplink is going to grow and grow, we consider this Version 0.5 in some respects. Uplink will grow to be an indispensable part of the Palm-size PC experience and we encourage our visitors and your readers to send in their comments and ideas to help us make Uplink serve their needs."

If you use the Pocket (Palm-size) PC, this is another site that deserves to be in your bookmark file. Go ahead and downlink to Uplink, and let them know what you think (editorial e-mail addresses are found on the "Contributing Writers" page).

Until next time, I'll see you OnLine. ■

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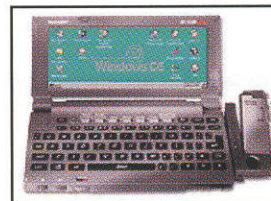
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Hal Goldstein



Palm the Winner? Not for long.

If Windows CE were a stock, I'd buy it today at a depressed price. Industry pundits have declared Palm Computing's Palm the winner leaving the Windows CE Palm-size PC on life support if not dead. Since Palm has between 75% and 80% of the palm size market share, the conclusion seems reasonable. Furthermore, Palm is going color; it is licensing its operating system to Sony, Handspring and others; and it is going public.

Yes, all that is true. But I would still like to take the Las Vegas odds and bet on Windows CE.

Windows CE will win. The reason is simple: Microsoft must be victorious in the handheld device space to perpetuate its overall market position. According to estimates, by 2003 as many dollars will be spent in the handheld device market as in the desktop arena.

Microsoft has all the pieces needed to win

Bill Gates recently changed Microsoft's "vision" for the first time in 25 years: "Great Software on any device, any time, any place." Windows CE is fundamental to that vision.

Microsoft has a proven methodology for overtaking a competitor with a strong market lead. Remember the Mac O.S. and Windows, WordPerfect and Word, 1-2-3 and Excel, and most recently Netscape and Explorer. In each case, early versions of

Microsoft products received poor reviews and a tiny market share. At early stages Microsoft studied the market and took feedback from customers. In every case, at version 3 Microsoft marshaled its forces producing a strong product and an effective marketing campaign. Coming this Spring or Summer: Windows CE, version 3.

Microsoft has the means and know-how to triumph. Microsoft can easily outspend any competitor. As importantly, Microsoft has the marketing experience and relationships needed for advertising, public relations, Web and retail channel success.

Microsoft has partnered with Hewlett-Packard, Compaq, Casio, and Symbol against Palm. Each of these companies supply experience, means, prestige, R&D, and marketing power.

Microsoft has the expertise and relationships necessary to work with thousands of independent software vendors experienced in programming for Windows platforms. Software for Windows CE provides solutions that will sell Windows CE devices.

Enter the Windows Powered Pocket PC

"Windows Powered Pocket PC" will be the new name for Windows CE palm-size devices. From the new name we can deduce much of Microsoft's market strategy.

"Windows Powered" extends the Win-

dows brand name to millions of Microsoft customers.

"Pocket PC" creates yet another "PDA" category — one with no baggage attached. The name clearly states what the device is — a PC that fits in your pocket. Microsoft's campaign will evangelize the benefits of having a computer in your pocket as opposed to having a simple electronic organizer.

What about the new color, expandable versions of Palm? Palm loses as it will be competing in Microsoft's "Pocket PC" arena.

Over time as Microsoft dominates the Pocket PC space, manufacturers will come down in price and functionality and compete well in Palm's "low-end" territory of doing a few things well.

The only question that remains is whether Microsoft did its homework with version 3. Will Pocket PCs be easy to use out of the box in a useable form factor? We bet that the answer is yes. We'll all learn more in the coming issues of this magazine. ■

Hal Goldstein (hal@thaddeus.com) is Executive Editor and Publisher of *Handheld PC Magazine* and president of Thaddeus Computing (www.thaddeus.com). He lives in Fairfield, Iowa with his wife and two sons. He currently is rehearsing his role as Nahum the Beggar in a local production of *Fiddler on The Roof*. He volunteers as technical consultant to the Natural Law Party (www.natural-law.org), an independent political party.

COMING NEXT ISSUE...

- *Microsoft Launches Pocket PC*
- *A first look at the new Pocket PC devices*
- *We review the exciting new crop of Pocket PC apps*



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